



CX202 / MAY 2024 / \$10.00AU

INTEGRATION / AUDIO / LIGHTING / VIDEO / STAGING

NEW ZEALAND

# THE NATIONAL IN NZ

Oceania produces back-to-back shows for The National following the release of two acclaimed new albums

## THE COMMS ISSUE

Featuring the latest advancements in communications, along with the industry-leaders and new products making it happen

GREEN-GO is all in, with BridgeX, the Stride wireless series, and the DanteX interface

Riedel Enhances Interstellar Technologies' Space Launch

The P.A. People providing 25 Years of Network Based Solutions

LIVE

## THERE'S A NEW PLAYER IN TOWN

JBL VTX A Series returns the brand to the big stages and riders

### News

- / Vale Andy Ciddor
- / Martin MAC Ones at Australian Idol Finale
- / Show Technology Celebrate 30 Years
- / Brighter Days with ACME Lighting
- / AtlasLED turns 90!
- / SafeGuard goes Low-Carbon
- / ICC Sydney's Immersive Experience
- / ENTECH Community

### Regulars

- / Andy Stewart's Listen Here
- / Jenny Barrett in NZ
- / Brian Coleman: The Gaffa Tapes

### Road Test

- / Solid State Logic Pure Drive Octo
- / ShowPro LED ePAR UV

**MICROCOM<sup>®</sup> XR**  
WIRELESS INTERCOM FOR EVERY BUDGET

## ALL-IN-ONE HEADSET

**PLIANT<sup>™</sup>**  
TECHNOLOGIES

PMC-HS900XRS-AN

PMC-HS900XRD-AN

**NAS**

VIC: (03) 8756 2600  
NSW: (02) 9898 0670  
sales@nas.solutions





**JBL**

PROFESSIONAL

# VTX A-SERIES

## MAKING ITSELF HEARD AT AUSTRALIAN FESTIVALS



- Scalable solutions for mid to large productions
- Patented rigging and suspension system
- Leading software tools including 3D acoustic simulation
- Finance available



**madisonAV**  
Specialised AV Solutions

MadisonAV has recently deployed the cutting-edge JBL Professional VTX A-Series line array system at various Australian festivals and events, such as the St Kilda Festival, BIGSOUND, Rolling Sets Festival, and Let the Good Times Roll Festival.

Scan the QR code to read testimonials from Australian promoters, production companies, and audio operators regarding the system's performance, and get in touch if you would like to discuss a demo or rental for your upcoming event.



**Sales Enquiries** 1800 00 77 80 [proaudio@madisonav.com.au](mailto:proaudio@madisonav.com.au)

**beyond connected**

# CONTENTS

## News

Vale Andy Ciddor	4
Martin Professional MAC Ones at This Year's Australian Idol Finale	6
Show Technology Celebrate 30 Years	8
Brighter Days with ACME Lighting	10
AtlasIED turns 90!	12
High Safety and Low Carbon with SafeGuard	14
ICC Sydney's Immersive Projection Experience	16
Buck asks 'What is ENTECH Community?'	18

## New Gear

20

## Features

Live: The Caravan Hits The Road <i>by Andy Stewart</i>	27
Theatre: The Lehmann Trilogy, Theatre Royal, Sydney <i>by Jason Allen</i>	30
Barton Sound Systems' Track Records with Meyer Sound <i>by Jason Allen</i>	40
Live: There's a New Player in Town - JBL VTX A Series <i>by Jason Allen</i>	43
Anita's Theatre gets the Live Nation Treatment <i>by Jason Allen</i>	66
A first in the Southern Hemisphere for Crown & L-Acoustics	69
Review: Electricity for the Entertainment Electrician & Technician <i>by Kurtis Hammer</i>	72
WDISDT: Chris Kennedy's Hard Landing <i>by Julius Grafton</i>	74

## Communications

GREEN-GO BridgeX extends remote production capabilities	52
GREEN-GO DanteX is key for Tori Amos tour Comms	53
GREEN-GO Makes Strides	54
Riedel Enhances Interstellar Technologies' Space Launch	56
The P.A. People - Network-Based Solutions	60
The Future of Assisted Listening <i>by Jason Allen</i>	62

## Regulars

Listen Here: Get Back To Where You Once Belonged <i>by Andy Stewart</i>	34
New Zealand: The National Returns to NZ <i>by Jenny Barrett</i>	36
The Gaffa Tapes: Incongruous Engagements <i>by Brian Coleman</i>	80

## Road Test

Solid State Logic Pure Drive Octo <i>by Andy Stewart</i>	76
ShowPro LED ePAR UV <i>by Kurtis Hammer</i>	78



Cover Photo - The National. Credit: Chris Zwaagdyk.  
Contents Photo - The Lehman Trilogy. Credit: Daniel Boud.

CX is published by VCS Creative Publishing Pty Ltd  
PO Box 1045, Ascot Vale, VIC, 3032  
Phone +61 (0)407 735 920 | Email [jason@vcscreative.com](mailto:jason@vcscreative.com)

Editor and Publisher: Jason Allen  
Layout: Hush Creative Productions – Mark Underwood and Alisha Hill

All contents COPYRIGHT CX Network Pty Ltd 2024.  
Nothing herein to be reproduced in any format without express written consent.



**CXNETWORK**

[cxnetwork.com.au](http://cxnetwork.com.au) | CX weekly news email





Andy Ciddor at the Desk



Andy Ciddor

# Vale Andy Ciddor

## *So long, and thanks for all the fish*

**Andy Ciddor's passionate and committed career in technology, production and live performance of over five decades came to an end on March 30th after taking advantage of Tasmania's Voluntary Assisted Dying program to end his struggle with stage-four bile duct cancer.**

Starting as many of us do in high school, out of frustration at the state of a school production, his career spanned theatre, broadcast, production, teaching, consulting writing and editing, sharing his passion and mentoring the next generation of designers and technicians. He was followed into the industry by his brothers Jonathan and Braham and most recently, his daughter Rivka.

From working at GTV9 on iconic productions like Hey Hey It's Saturday and various tonight shows, he moved to Perth to join STW9 where he earned the title 'Captain Kilowatt'. Andy's teaching career began at the WA Academy of Performing Arts where he took the Theatre Arts Lighting and Sound course and developed it into a well-regarded and independent program. Passionate about the industry and a huge advocate for it, he was also one of the founders of the Australian Lighting Industry Association (ALIA), an active member of the Australia Cinematographers Society, and sat on and contributed to standards committees to ensure the industry was being fairly represented. His contributions to the entertainment industry have been profound.

The last few decades have seen him consulting and writing about his passions, contributing to industry publications around the world. Andy was the founding editor of the AV Technology magazine, which he also ran for over seven years. His technical writing credits include whitepapers, tutorials, technical and product manuals, web content and training

materials across a huge range of topics and technologies. Most recently he edited the CTS Certified Technology textbooks for McGraw-Hill and AVIXA including the Technology Specialist Exam Guide, Certified Technology Specialist-Installation Exam Guide, Second Edition, and the CTS-D Certified Technology Specialist-Design Exam Guide, Second Edition.

Andy was a champion for sustainability and change and developed the milliWatts program

- supporting the industry to reduce the impact that technology has on the planet with simple, careful, but significant changes to what we do every day.

Andy is survived by his partner Val, children Rivka, Lachlan, Priscila, Rhian, and Greg and grandsons Atticus and Elijah.

A secular celebration of Andy will be held on Sunday May 12th from 2pm at St Martins Theatre in South Yarra.



ACS Event



# NEXO

"More bottom end and more clarity."

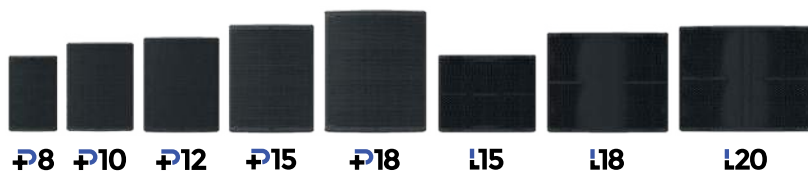


**Bruce Johnston**

*(Oasis, Crowded House, Hoodoo Gurus, Divinyls, Midnight Oil)*

## **P**series

The P+ Series sets new performance standards for compact point source loudspeakers. A true synergy of performance and versatility, P+ delivers perfect phase alignment, exceptional clarity and a smooth response across the full frequency range.



**Distributed by Group Technologies**

**T** 03 9354 9133 **E** [sales@grouptechnologies.com.au](mailto:sales@grouptechnologies.com.au) **W** [grouptechnologies.com.au](http://grouptechnologies.com.au)



**GROUP  
TECHNOLOGIES**





## *Martin Professional MAC Ones Steal the Show at This Year's Australian Idol Finale*



**The stage for the country's most anticipated singing competition, Australian Idol, was awash in a stunning kaleidoscopic display of colours thanks to the brand-new collection of Martin Professional MAC One fixtures supplied by Chameleon Touring Systems.**

Lighting Designer Ian Anderson was thrilled to have 52 units of MAC Ones on the production set, commenting that they matched perfectly with all of the other Martin fixtures in the system, which included MAC Vipers, MAC 101s and Encores.

"The MAC One's LED backlight effects added a nice tinkle in the back of shots," says Ian.

"Apart from the Fresnel-style lens being visually stunning, the new MAC Ones are rich in their colours and are able to obtain nice pastels, with a zoom ratio being very versatile from tight spot to a medium flood."

Hanslee Lim, Director of Lighting for Harman Professional APAC, expressed, "It's phenomenal that in less than five months

since we announced the Martin MAC One, we have already seen several rental companies showing off their newly acquired stock at premier live events. Seeing the way the MAC Ones were used on Australian Idol, we know we have delivered a true winner!"





INTRODUCING  
**MAC VIPER XIP**



# THE LEGEND STRIKES AGAIN

From concert stages to TV studios and EDM festivals to opera houses, the new MAC Viper XIP covers any application.



**OPTIMIZED FOR  
INDOOR AND  
OUTDOOR USE**



**28,000 LM  
CONSISTENT  
HIGH OUTPUT**



**MOST  
FEATURE RICH  
MAC EVER**



**BEST IN CLASS  
OUTPUT, WEIGHT  
AND SIZE RATIO**



**LOW  
NOISE  
LEVEL**



**HIGH-QUALITY  
OPTICAL  
PERFORMANCE**

©2024 HARMAN. All rights reserved. The MAC Viper XIP is designed for temporary outdoor installation only. Do not use the fixture for permanent outdoor lighting.

For all enquiries and sales, contact your nearest Show Technology below or email [sales@showtech.com.au](mailto:sales@showtech.com.au)

**Australia** | Sydney 02 9748 1122 | Melbourne 03 9681 7511 | Perth 08 9248 8119 | Brisbane 07 3267 3177

**New Zealand** | Auckland +64 9-8693293





# Show Technology Celebrate 30 Years

Thirty years ago, Emmanuel and Gina Ziino followed their dreams by founding Show Technology. What began as a startup dream has grown into Australasia's leading professional lighting and AV distributor that today employs close to 50 professionals.

Continuously evolving to meet the ever-changing needs of the industry, Show Technology now distributes premium technology from a vast array of worldwide suppliers ensuring there is always a solution for its valued clients.

However, Show Technology is known not only for the incredible product it distributes but its famous service, backup and client-focus.

"Over the past 30 years, we have nurtured long-standing relationships with clients across various sectors and I am immensely proud of our reputation of being the supplier that cares," commented Emmanuel Ziino, Managing Director. "By blending cutting-edge technology and a deep understanding of clients' unique requirements, we have carved ourselves a unique position in the industry."

Emmanuel acknowledges that this exciting journey would not have been possible without the passion of his team, commenting that they have always been his true assets.

"I have been asked what the reason behind the success of our company is and what its biggest strength is and I always reply 'my team'," he remarked. "We have had several staff members

with us for many years and we have some exciting new ones too."

People enjoy working with Show Technology, as proven by the amount of long-serving team members. This year is also the 30th anniversary for Vince Haddad and James Moore, Cat Strom is celebrating 25 years, Ed Santucci and Gino Lombardi 20 years plus Keith Bradshaw 10 years.

Many of Show Technology's supply partners have also been with them from the beginning including MA Lighting, Claypaky, and Martin in particular. Many others have been with them for a very long time.

Three decades of success, innovation and valuable partnerships have made Show Technology what it is today. The company and team truly care about the customer's success. So, with the utmost confidence, Show Technology look forward to a promising future and the next 30 years!

All year, Show Technology will celebrate this incredible milestone on its social media, with flashbacks to key or simply quirky projects, staff profiles, client contributions, supplier stories and some amazing competitions. The ideas just keep coming so stay tuned!



2001 - The Olympic Cauldron



2002 - The famous Italian themed ENTECH Stand



2002 - XVIII Commonwealth Games



2004 - Visiting Claypaky in Italy



2007 - Royal Easter Show





## RIVALE PROFILE

the ultimate revolution

RIVALE PROFILE is the first ultra-equipped luminaire in AYRTON's brand new 'ULTIMATE' series, all models being perfectly homothetic and sharing common features, delivering previously unimaginable weight to output ratios.

Developed for mixed use indoors and outdoors, and in all conditions, RIVALE PROFILE, with its unique visual signature, is unparalleled on the market.

Weight determines performance, and RIVALE PROFILE weighs only 30.8 kilos.

To allow you more creativity and freedom in your lighting design, RIVALE PROFILE has been provided with continuous rotation of the pan and tilt movement.

RIVALE PROFILE, a unique projector that boasts performance, creativity, subtlety and power, is the most versatile fixture created by AYRTON to date.

A truly innovative luminaire with no equivalent on the market...

3 Series - Source  
**450 W - 6500 K**

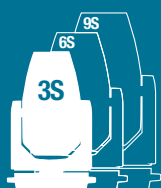
Lumens  
**30,000**

Zoom aperture  
**4° to 52°**

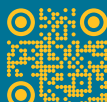
Frontal Lens  
**160 mm**

IP Rating  
**IP65**

Weight  
**30.8 kg**



SCAN  
FOR  
MORE



[www.ayrton.eu](http://www.ayrton.eu)



**AYRTON**

**SHOW**  
TECHNOLOGY

EXCLUSIVE DISTRIBUTOR FOR AUSTRALIA AND NEW ZEALAND

SHOW TECHNOLOGY - Phone: +61 2 97481122 - [sales@showtech.com.au](mailto:sales@showtech.com.au) - [www.showtech.com.au](http://www.showtech.com.au)



# BRIGHTER DAYS

Photos by Jesse Leigh Connelly and Tony Lamplough



## WITH ACME LIGHTING

Four industry legends – Cautech, Austage Events, Peninsular Production Services and Lock and Light – brought their forces together for a wonderful fundraising festival, Brighter Days, which took place over the March Labour Day weekend in Bright, Victoria.

The festival has been supported by many artists including this year's line up of Chocolate Starfish, Kate Ceberano, Ross Wilson, Russell Morris, Rogue Traders, Screamin' Eagles and many more.

The lighting rig for this special event included eight ACME ENERGY SPOT PRO fixtures, 20 ACME ICARUS 320 LED wash beams, 12 ACME WILLOWS and two DJPOWER H3 hazers. All fixtures were controlled by a ChamSys Stadium Connect console.

Cautech was in charge of the lighting design,



with Tony Lamplough, Simon Pentz, and James Christie taking on the lighting operations. Matt Devine was the LD for the Screamin' Eagles, with his own ChamSys MagicQ MQ250M Stadium lighting console.

The festival started 12 years ago as a fundraiser for a rare skin disease called Epidermolysis

Bullosa (EB). This disease causes skin blisters at the slightest bump, for which there is not much treatment or Government support, except through DEBRA (debra.org.au), which was set up to assist the families with children suffering with this disease.

[www.brighterdays.org.au](http://www.brighterdays.org.au)



# STARCOLOR RANGE

## LED FLOOD LIGHTS



**STARCOLOR128**

### STARCOLOR RANGE KEY FEATURES



**STARCOLOR72**

- 9X 8W 4-IN-1 LEDS
- DMX CHANNELS: 4, 8, 10
- ROBUST ALUMINIUM HOUSING



**STARCOLOR72B**

- 9X 8W 5-IN-1 LEDS
- RGBAW COLOR MIXING
- BUILT-IN BATTERY



**STARCOLOR200**

- 24X 10W 4-IN-1 LEDS
- DMX CHANNELS: 4, 8, 10
- INTEGRATED OMEGA CLAMP



**STARCOLOR540**

- 36X 15W RGBW LEDS CONTROLLED PER ROW
- WIRELESS DMX
- OPTIONAL MOTORIZED ZOOM



WWW.AVECORP.COM.AU

03 9706 5325



# AtlasIED turns 90!

**AtlasIED, a leading global manufacturer of high-quality commercial audio and communication technology that's distributed in Australia and NZ by PAVT, is celebrating a rare milestone in 2024: 90 years in business!**

Atlas Sound, who acquired Innovative Electronic Designs (IED) in 2011 to form AtlasIED, has been providing audio and communication solutions to the world since way back in 1934, and is now considered a global leader in the manufacturing of high-quality commercial audio and communication technology solutions for applications ranging from transportation to houses of worship. Building on prior owner Loyd Ivey's legacy, who passed away in September 2023, AtlasIED and current owner, John Ivey, remains steadfast in their approach to operating as a family-owned business.

"We couldn't be prouder of our AtlasIED family for reaching 90 years as a global leader in audio and communications technology," said John Ivey, President and CEO at AtlasIED. "Arriving at this milestone reinforces our commitment to never-ending growth and innovation, maintaining relevance, and high-quality service to our customers."

Initially gaining recognition for its high-quality PA loudspeakers and microphone stands, Atlas Sound catapulted itself into a well-rounded manufacturer of technologies that have revolutionised the commercial AV industry. In 2011, Atlas Sound and IED combined their sales, marketing, engineering, and support teams to better serve their customers and market segments. For the past 13 years, this merger has proved to be one of the most successful and beneficial in the industry.

Today, the company focuses on application-based solutions with a wide and flexible range of installation and aesthetic options, including communications and audio

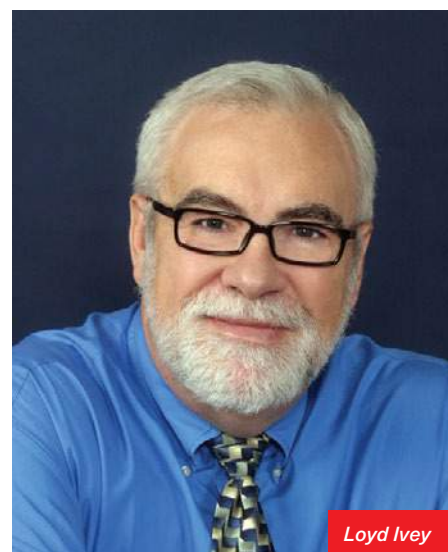
platforms, and a broad array of loudspeakers for commercial applications. Recently announcing enhancements to its popular Atmosphere audio control system platform and key strategic investments in threat detection technology, as well as premium and beam-steering loudspeakers, AtlasIED is well-positioned for future growth.

Though the company celebrates 90 years in 2024, AtlasIED's beginning can be traced back to the very origin of the commercial sound industry. During the late 1920s, the Warren Harding political campaign demonstrated the need for better sound reproduction than the traditional megaphone as crowds grew at political rallies.

In 1934, Atlas Sound made headlines by being the first company to combine the horn shape of the megaphone with electro-acoustics to create outdoor PA loudspeakers. This greatly improved public audio and serves as an early example of the versatile solutions AtlasIED brings today to airports, hospitality, schools, and other applications.

Bob Reinhardt and Carl Blumenthal, the company's founders, took a special interest in mechanical devices and tooling. Noticing the demand for microphone stands, the pair began designing and metalworking. Today, AtlasIED remains a versatile manufacturer with full-time manufacturing facilities in Ennis, TX and Phoenix, AZ. The largest of these facilities, about 300,000 sq ft is centrally located in Ennis, Texas, boasts metalworking, molding machines, robotics and automation, and houses the majority of the company's inventory.

*"It's an honour to be able to look back at AtlasIED's legacy, knowing that there's so much more ahead of us," continued Ivey. "This year, we recognise our accomplishments that serve as a tribute to the people and technology which have made AtlasIED the global leader it is today. To say we are proud is an understatement; we cannot wait to see what the next 90 years will bring!"*



Since its inception, the company has helped customers improve end user experiences in some of the most visited venues in the world, such as New York's LaGuardia Airport and Moynihan Train Hall, along with supporting world-famous talent ranging from Whitney Houston to The Beatles.

Contact PAVT for more information on AtlasIED in Australia and New Zealand.

Australia:  
Phone: +61 3 9264 8000  
Email: [reception@pavt.com.au](mailto:reception@pavt.com.au)

New Zealand:  
Phone: +64 9 272 8041  
Email: [reception@pavt.co.nz](mailto:reception@pavt.co.nz)





# The Leaders in Emergency Notifications



**AtlasIED IPX Series™** Get the message everywhere all the time

IPX solutions consist of VoIP and InformaCast compliant IP endpoints, include RGB LCD displays with network time/date synchronization, built-in microphones for full duplex communications and RGB LED flashers. IPX's IP to analogue gateway can connect analogue audio and triggering systems to the network for even more coverage during critical alerts.



## Reach Everyone with IPX

IPX Series IP endpoints are designed to live on standard VoIP networks, leveraging existing infrastructure to deliver clear audible and visual announcements to specific zones or areas. IPX endpoints will automatically register with a wide array of 3rd party applications to increase functionality in a variety of deployments.



Contact us at PAVT for more information

Australia [sales@pavt.com.au](mailto:sales@pavt.com.au) | +61 3 9264 8000

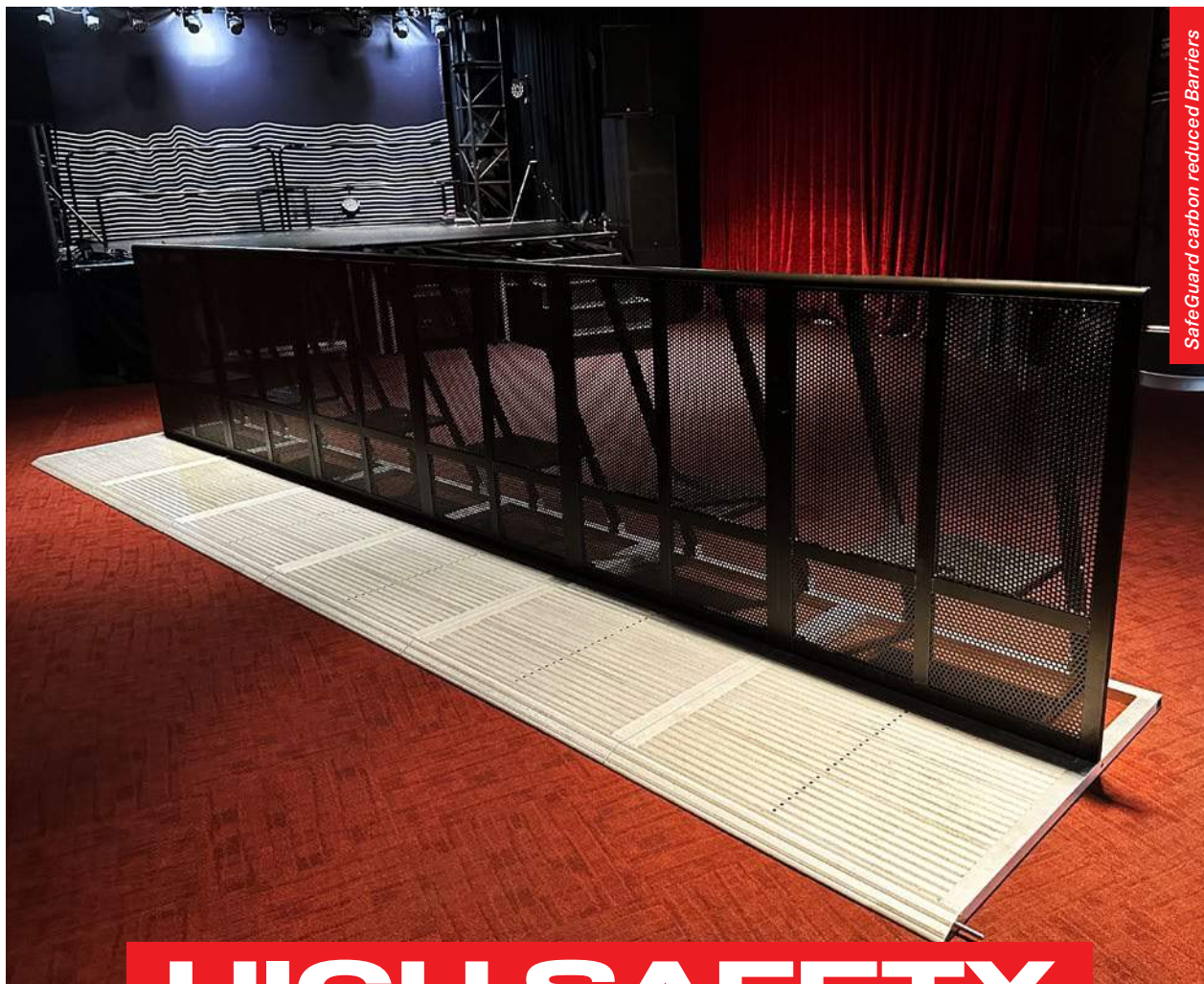
New Zealand [sales@pavt.co.nz](mailto:sales@pavt.co.nz) | +64 21 410 050



[www.pavt.com.au](http://www.pavt.com.au)



## New event barrier innovation enhances green event capability using certified low carbon aluminium



SafeGuard carbon reduced Barriers

# HIGH SAFETY AND LOW CARBON with SafeGuard

**Australasian event crowd barrier supplier SafeGuard Barriers has secured an exclusive licence to stock event barriers made in Australia and New Zealand from aluminium with very high recycled content. 93% of the aluminium in their new event barrier is certified low carbon through New Zealand's Toitū carbon reduction programme.**

SafeGuard Barriers have partnered with McKechnie Aluminium to make it easier for event promoters, artists, and production managers to work towards their environmental goals and deliver a more environmentally friendly event without compromising on event quality or crowd safety. This low carbon aluminium has just 1.29kgs of CO<sub>2</sub>e per kg of aluminium for Scope 1 & 2 assessment.

SafeGuard Barriers Director Craig Edwards says the timing is right for a carbon reduced barrier product, where the environmental impacts of events are being focused on and scrutinised more.

"Like everyone, our industry has a responsibility to innovate and deliver more environmentally sustainable solutions," says Craig, who has worked in the event industry for almost 20 years.

"With this low carbon aluminium product, we're reducing our environmental footprint while still offering a safe and durable crowd barrier product. It's a no-brainer when looking at ways to be more environmentally friendly without any impact on quality."

"It's taken us five years of R&D and testing to get to this point where we have a product that exceeds safety standards, is the most

user friendly, and now the most renewable barricade on the market today."

"Being patient and working closely with our good friends at McKechnie Aluminium is now paying off, seeing the end product. Russell Penwarden from RP3D Design has been pivotal in working alongside SafeGuard Barriers for the past five years, also in creating this new barrier working on design and functionality."

For more information contact Craig Edwards  
[www.safeguardbarriers.com](http://www.safeguardbarriers.com)  
[craig@safeguardbarriers.com](mailto:craig@safeguardbarriers.com)  
 Phone +64 21 991 226



# ALL-IN-ONE HEADSET



**PMC-HS900XRS-AN**



**PMC-HS900XRD-AN**

**MICROCOM<sup>®</sup> XR**

WIRELESS INTERCOM FOR EVERY BUDGET

The MicroCom 900XR All-in-One wireless headset combines the great sound quality, excellent range, and budget-friendly price point of MicroCom XR beltpacks with the comfortable fit, exceptional noise isolation, and flip-up microphone muting technology of the SmartBoom PRO headset, but without the wire. The MicroCom 900XR beltpack technology has been engineered to fit into the SmartBoom PRO headset ear cup.

Available in single-ear and dual-ear configurations, the wireless headset is lightweight and its adjustable design allows for comfortable all-day wear.

**CONTACT NAS FOR  
A DEMONSTRATION.**

- Unique All-in-One Design
- Two-Channel System
- Up to 10 Full Duplex Users
- Unlimited Listen-Only Users
- Available Drop-in Charger
- Excellent noise isolation
- Mix/Match with MicroCom 900XR Beltpacks & Receiver Packs
- Lightweight & Comfortable
- Collapsible for easy storage
- Field-Replaceable Battery
- No BaseStation Required

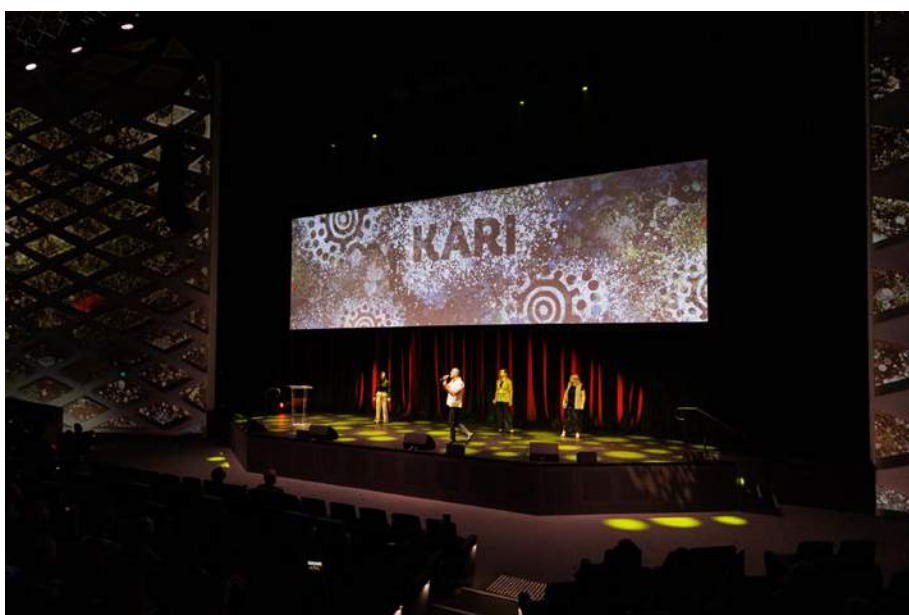
**PLIANT<sup>®</sup>**  
TECHNOLOGIES



VIC: (03) 8756 2600 | NSW: (02) 9898 0670 | [sales@nas.solutions](mailto:sales@nas.solutions) | [www.nas.solutions](http://www.nas.solutions)



# ICC Sydney's *Immersive Projection Experience*



**In an innovative move, International Convention Centre Sydney (ICC Sydney), has launched an immersive audio visual projection service exclusive to its iconic Darling Harbour Theatre.**

Event organisers can tap into ICC Sydney's developed immersive content or collaborate with the in-house Audio Visual Services team to develop customised content for projection.

Connecting event attendees to the rich culture of First Nations Peoples, ICC Sydney's

captivating digital animation and projection of Boomalli Aboriginal Artist, Jeffrey Samuels' 'Gadigal, Acknowledgement Respect' artwork set to an accompanying audio track of 'Barani' the whale gracefully swimming through the silvery waters of Gomora (Cockle Bay) was previewed at the venue's recent RESPECT: An ICC Sydney Experience.

ICC Sydney CEO and Group Director – Convention Centres, ASM Global (APAC), Geoff Donaghy said his team stood alongside its Legacy Program partners Boomalli Aboriginal Artists Cooperative, and hoped this service demonstrated another way in which the venue team was committed to Reconciliation.

"As an iconic destination, which stands and operates on the traditional lands of the Gadigal people of the Eora Nation – the land

of Tumbalong and the waterway of Gomora, on what is known today as Darling Harbour – ICC Sydney strives to truly reconcile with First Nations people through our business practices."

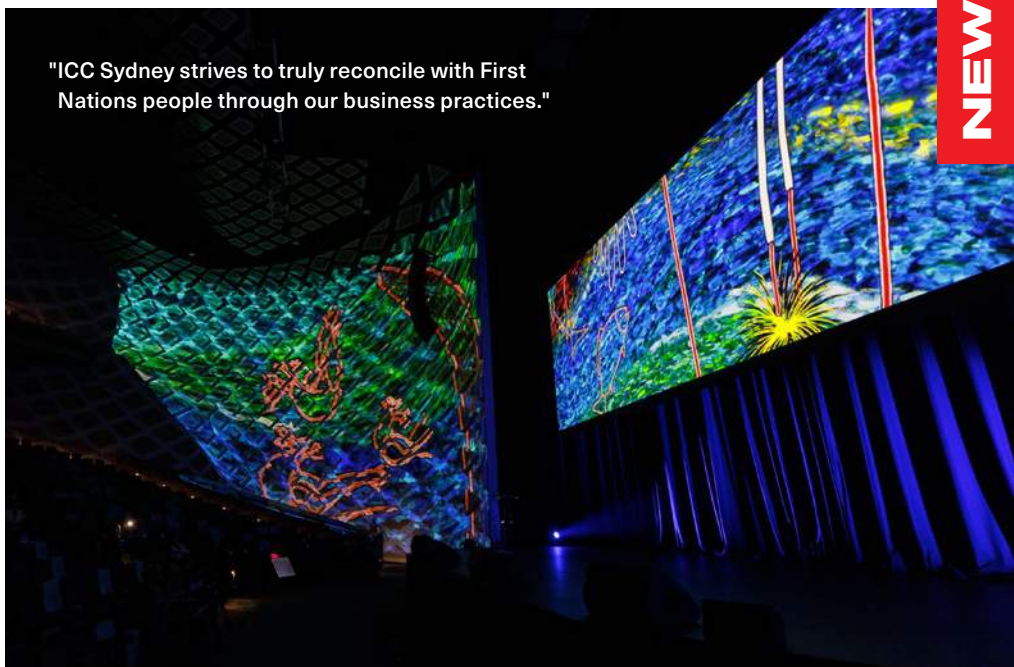
"While this new immersive projection experience has the power to deepen delegates' connection to the culture and stories of First Nations traditional custodians, the service also meets growing delegate expectations for socially impactful and connected events that are seamlessly integrated with technology, as highlighted in our RESPECT: Shaping Events for Success report," Mr. Donaghy said.

ICC Sydney Director of Audio Visual Services, Brian Nash said the new service is testament to the capability of ICC Sydney's in-house team





"ICC Sydney strives to truly reconcile with First Nations people through our business practices."



of Audio Visual professionals who utilise best in class technology and equipment.

"Innovation is a key cornerstone of our culture at ICC Sydney. Our team is dedicated to developing creative solutions that elevate attendees' event experiences. By presenting compelling content such as Jeffrey Samuels' animated, projected artwork alongside a traditional Welcome to Country or cultural performance, attendees can engage with First

Nations culture in a powerful, modern way.

"Our in-house AV Connect Hub team can now also collaborate with clients to create bespoke imagery that supports presentations of their corporate branding or event program content mapped to the theatre's panels for maximum visual impact," Mr Nash said.

ICC Sydney's suite of immersive projection services includes projection mapping

of customised content to the theatre's remarkable diamond acoustic wall panels, creating a 50-metre wide canvas to deliver up to 500 square metres of dynamic content.

To find out more about ICC Sydney's Audio Visual Services, visit [www.iccsydney.com.au](http://www.iccsydney.com.au), or to share your ICC Sydney experiences on your social channels, tag @ICCSyd and use the hash tag: #MoreThanAVenue.

# TIME IS MONEY DON'T WASTE YOURS ON PRODUCTION SET UP

Our VUEPIX INFILED display systems are designed specifically for touring & live production environments. We understand the time restraints in the production world. We offer high-performing LED touring systems that deliver stunning visuals in any light condition. The advanced touring panels feature intuitive locking system, ergonomic handles and other advanced features, assisting in easy and rapid installation and providing you with infinite creative possibilities for your stage production.

- ▶ Remarkably strong
- ▶ Intuitive locking system
- ▶ Front or rear access
- ▶ Extremely lightweight
- ▶ In-built angling system
- ▶ Wide range of accessories



**VUEPIX**  
INFILED

AUS 1800 VUEPIX | NZ 09 218 6532 | [info@vuepix.tv](mailto:info@vuepix.tv) | [VUEPIX.TV](http://VUEPIX.TV)





# 'WHAT IS ENTECH COMMUNITY?'

Buck Freeman

**Former Channels contributor Buck Freeman reunites with his editor Julius Grafton over a long-distance lunch to unpack this.**

J: Been too long! What and where are you?

*B: Lubbock Texas, college tour doing stage with The Wilts. It's midday lay-day so late breakfast at Skooners Grill. Got an Austin Straight on ice. Chicken steak comin'. You?*

J: 3am in Sydney, watching trash TV to stay awake. Cheese board and Chardonnay.

*B: You asked me to grill you – no puns – on your latest ENTECH twist, the 'Community' thing. ENTECH started after we met – where? NAMM 91, I think?*

J: Yes, it's 30 this year. Let's talk about our ilk, those who work with tech on shows. If you scratch most audio visual techs, workers on set, or in theatre, you'll find bands were their college.

*B: Indeed. Carry on.*

J: ENTECH has a primary purpose: bringing buyers to sellers. Buyers are everyone who works with the tech. Sellers sell tech and solutions, like services as well as kit. The old idea is that a buyer has a big flashing light hat that says 'money'. Wrong. Every tech is an influencer now. No rational buyer signs off on big dollars without asking the people who drive the gear.

*B: I still go to NAMM and some of the other shows when possible. They have colour-coded badges for 'buyers' so I get sidelined as 'just old crew'. Pisses me off.*

J: We don't code badges. The people we see getting ignored are sometimes female, which

pisses ME off. Some sellers used to diss the churchies until they did the math on where their gear goes. Much as I love our exhibitors, there's a small hard core of rump gristle who need to get into this century.

*B: Community?*

J: Kate and I hosted some info nights in April. It's obvious to us that there are a lot of isolated people who work in our lane. Especially freelancers. They usually carry top skills but the people they work with on a show, season, tour, or project today are directly competing with them for work tomorrow.

I see the same thing on the floor at ENTECH. We have, by virtue of what we are, a level playing field where people network, and not just for the next gig or project or sale. Where else can you find ground zero like ours? You go to a product launch and – rightly – you're the guest of the brand. ENTECH is Switzerland.

*B: In my case I'm in a clique of crew working a known slew of clients. It's less of the Squid Game, minus the millions, that the kids endure.*

J: Kate and I want our audience to know that we know. We know the lows. Too many good people disappeared in the pandemic, got 'real' jobs paying weekly in multiples. Tech pay is lousy here; \$30 to \$40 an hour in a country where the national average wage is 100 grand or \$57 per hour. And health outcomes are lousy due to unmoveable deadlines. The show goes on or the project opens on time. That's it. You make it be. "Sleep when you die", one manager told a crew.

ENTECH always champions those who support. That started right after our first show in 1994. My mentor Roger Barratt died. On his death bed he asked me to run a Barratt Lighting Scholarship, and said it was provided for. With help of many, especially Roger's then business partner Tony Davies, we sent a guy to London as Roger's estate was bogged down. Then his executor/lawyer called me to say, "there is no scholarship in the will". That ended it.

*B: Executor and lawyer. Says it all.*

J: We've had an open space policy for those who do the support work - ARCA, Crew Care, Support Act, Entertainment Assist, LPA, Tech Sisters - anyone. They get free space and publicity if they want it. So that's one part of 'Community'. The other is we're running some free 'Community Nights' in June, to give back a bit.

*B: Maybe get AA and some rehab shops too?*

J: Well... ummm.

*B: Mental health is a new thing in our timeline, right?*

J: Yes, very much, as is also recognising and managing bullies and bad employers. They still exist and always will, now they're just hiding behind a suit. I've met a few in the venue management biz over recent years too, which is why we won't run our show at certain venues.

*B: Well, best with that. My chicken steak is here, so I'll jet. Love your work.*

J: Have another A Straight!

ENTECH runs across NZ in August, and AU in October. [www.entech-roadshow.com](http://www.entech-roadshow.com)



# 'entech COMMUNITY NIGHTS

**SYDNEY TUESDAY JUNE 11**

**MELBOURNE TUESDAY JUNE 18**

**BRISBANE TUESDAY JUNE 25**

Free networking nights where you'll meet like-minded tech crew, enjoy finger food and drinks from 6.00pm

**You're in the ENTECH Community, and now you have a place to connect, network and find solutions to issues that affect us all. You are a working tech, freelance or employed, a manager, or a business owner across any of the ENTECH diaspora.**

6.00pm: Welcome drinks and finger food.

7.00pm: Gathering talk.

7.45pm: More networking!

9.00pm: Close.

**Theme is casual, RSVP essential!**

Please register to attend  
[www.entech-roadshow.com/community](http://www.entech-roadshow.com/community)

'entech  
community





# SHURE DEBUTS NEXADYNE DYNAMIC VOCAL MICROPHONES

## *Major New Mic Range from Shure with Dual Transducer Technology*

Shure has introduced a new era of vocal precision: the Nexadyne dynamic microphone platform with Shure Revonic Dual Transducer Technology.

Available now in cardioid and supercardioid polar patterns, Nexadyne vocal microphones achieve state-of-the-art polar pattern consistency, unparalleled noise reduction, and best-in-class professional touring performance, so sound engineers and performers can confidently provide front-row vocal clarity to every corner of the venue, every time.

"Nexadyne is the next chapter of Shure's storied history as the leader and innovator in dynamic microphone technology," shared Nick Wood, Senior Director, Professional Audio Products, at Shure. "With built-in acoustic signal processing, the Nexadyne platform ushers in a new era of modern live performance that engineers and vocalists can trust on stage night after night."

### **Vivid, Effortless Clarity With Revonic Technology**

To deliver these revolutionary benefits, the Nexadyne platform is built on Shure's patented Revonic Dual Transducer Technology. This technology minimises the amount of time and effort required by sound engineers to make

performers' live vocals sound exceptional and cut through the mix.

Most dynamic microphones are designed with only one transducer. Breaking from the mold, Shure's innovative Revonic Technology implements two precisely matched transducers.

These transducers work together to provide a greater range of acoustic optimisation, maximising specific frequencies and minimising unwanted noise, especially handling noise and mechanical vibration. This built-in signal processing delivers a stronger output than traditional single transducer designs, while subsequently removing the need for a traditional pneumatic shock mount and time-consuming, corrective audio editing.

### **Built-In Reliability Without Compromise**

Implementing the benefits of perfectly matched transducers requires thorough attention to detail throughout the manufacturing process. By maintaining and surpassing the highest, stage-tested standards for every Nexadyne microphone, Shure has guaranteed optimum manufacturability for consistent performance.

As the leader in handheld microphones and a pioneer in dynamic microphone technology,

Shure continues to set the standard for vocal reproduction and industry-leading build quality with the introduction of Nexadyne and Revonic Technology.

### **Empowering A New Era Of Precision For Vocalists And Sound Engineers**

With Nexadyne premium vocal microphones, performers and sound engineers can be confident the entire audience will hear an acoustically honest representation of their performance with vivid clarity.

Vocalists using Nexadyne vocal microphones will immediately experience greater clarity and range of detail, which enables more control of vocal nuance and less time either holding back or pushing the voice too hard, no matter the size of the venue.

For engineers, Nexadyne vocal microphones achieve improved signal quality, delivering a clearer source signal to work with during the mixing process. The higher output of the microphone ensures engineers can accurately reproduce and balance the performer's vocals in the overall mix with significantly less corrective audio processing.

*Jands is the exclusive distributor of Shure in Australia, offering access to Shure's legendary range of products and expert support and guidance. For more information visit [www.jands.com.au](http://www.jands.com.au) or visit your authorised local dealer.*

**SHURE**

# LISTEN.



**MORE OF WHAT YOU WANT.  
LESS OF WHAT YOU DON'T.**

## Introducing the Nexadyne Series of Dynamic Vocal Microphones.

Featuring patented Revonic™ Transducer Technology, the acoustic signal processing of the dual-engine design delivers vivid vocal clarity. Featuring best-in-class off-axis rejection, Nexadyne 8 is available in both supercardioid and cardioid polar patterns with XLR and wireless configurations.

Innovation never stops at Shure. Learn more about the microphones that make seasoned tour veterans pause and take a closer look at [shure.com/nexadyne](https://www.shure.com/nexadyne)

proudly distributed by  
**JANDS**  
[jands.com.au](https://jands.com.au)



# NEW



## DiGiCo Version 1742

DiGiCo's latest software release, Version 1742 is for all SD and Quantum consoles. Now available for free download from the Info and Downloads section of the DiGiCo website, found under the Support tab at [www.DiGiCo.biz](http://www.DiGiCo.biz), V1742 replaces previous version V1619, which was rolled out a year and a half ago. Of particular note, the installation of V1742 enables Quantum338 and Quantum225 owners to purchase and harness DiGiCo's optional new Pulse software extension, revealed this January, increasing their number of input channels, busses, and Mustard and Nodal Processors. V1742 will also offer Quantum7 and Quantum5 customers a bump in Mustard processing numbers for free.

**Australia and New Zealand:**  
Group Technologies  
[grouptechnologies.com.au](http://grouptechnologies.com.au)  
or +61 3 9354 9133



## Brompton Gen 3

Brompton's Gen 3 range of LED processors is built on the latest Agilex 7 FPGA technology from Intel and delivers Brompton's industry-leading functionality, image-quality and reliability, alongside support for the latest video standards.

The first product in the Gen 3 range is the flagship 8K Tessera SQ200 processor. It follows in the footsteps of the multi-award-winning SX40, delivering the same core feature-set and full backward-compatibility with existing Brompton-powered LED panels, as well as existing XD data distribution units, but now supporting 8K and 4x4K workflows and added support for AV-over-IP protocols such as ST2110 and IPMX. The SQ200 brings a staggering 20-fold increase in power over the SX40, making it the world's most powerful 8K LED video processor and ensuring ample headroom for many years of continued feature innovation.

**Australia: ULA Group**  
[ulagroup.com](http://ulagroup.com) 1300 852 476  
**New Zealand: ULA Group**  
[ulagroup.com](http://ulagroup.com) (09) 218 6532

## Australian Monitor TRUEBLU

Australian Monitor's TRUEBLU Bluetooth audio receiver is engineered to enhance audio experiences in both domestic and professional settings. Key features include a Bluetooth v5.1 audio receiver with advanced profile support (A2DP Sink, AVRCP, HFP Sink), a front panel with 3.5mm auxiliary input, Bluetooth media controls, pairing, and source selector buttons, a rear panel featuring stereo balanced XLR audio output and stereo unbalanced RCA, a USB-C programming connector and RS232 control for advanced setup and integration. The TRUEBLU is programmable via free Bluetooth Control software for custom naming, PIN security, and audio features.

**Australia: Amber Technology** [www.ambertech.com.au](http://www.ambertech.com.au) 1800 251 367  
**New Zealand: Amber Technology** [www.amber.co.nz](http://www.amber.co.nz) (09) 443 0753



## Audio-Technica AT-UMX3

Audio-Technica's first dedicated USB mixer for musicians and content creators features dedicated instrument inputs and a loopback function for easy live streaming. Its plug-and-play USB-C connection is compatible with Windows PC, MAC, iOS, iPad, or Android devices. Made with musicians in mind, the AT-UMX3 features a Neutrik XLR/6.3mm combo microphone jack (with selectable 48V phantom power) and a switchable Hi-Z or stereo input for guitar, bass, keyboard, or other external devices.

**Australia: TAG**  
[www.tag.com.au](http://www.tag.com.au) (02) 9519 0900  
**New Zealand: Direct Imports**  
[directimports.co.nz](http://directimports.co.nz) (06) 873 0129



## Elation Fuze Teatro

The Fuze Teatro is the first fanless automated luminaire incorporating an additive colour engine, which further reduces noise levels compared to conventional CMY systems. The 480W homogenised RGBMA LED array with CRI of 92 offers outstanding colour rendering capability, calibrated white points and a full-spectrum colour gamut from soft pastels to intense primaries. The carefully-tuned LEDs ensure accurate colour reproduction and dynamic whites from 2400 - 8500K while delivering a powerful output of up to 15,000 lumens out of a large 140mm front aperture. The RGBMA LED array is the same colour mixing system as found in other Elation Fuze and KL series fixtures for a perfect colour match.

**Australia: ULA Group**  
[ulagroup.com](http://ulagroup.com) 1300 852 476  
**New Zealand: ULA Group**  
[ulagroup.com](http://ulagroup.com) (09) 218 6532



## Elation Proteus Radius

The Proteus Radius is a compact, high intensity IP66 Beam FX fixture powered by a Solid-State Phosphor-Converted (SSPC) light engine. Its efficient light engine delivers an ultra-intense 0.9° beam that is ideal for both indoor and outdoor applications. Featuring endless 360-degree pan and tilt movement, two gobo wheels housing a selection of 13 interchangeable-rotating/indexing metal gobos and 29 static-stamped metal gobos, the Radius offers four prisms divided between dual overlapping planes to split beams in virtually unlimited combinations for eye-catching aerals.

**Australia: ULA Group** [ulagroup.com](http://ulagroup.com) 1300 852 476  
**New Zealand: ULA Group** [ulagroup.com](http://ulagroup.com) (09) 218 6532

# NEW GEAR



EARTHWORKS AUDIO

## Definition, *dynamics*, detail & clarity

Earthworks Audio is the fastest growing brand in drum microphones. That's because of the attack and punch, the power and speed. And it's that speed that gives the sense of definition, dynamics, detail and clarity to all Earthworks mics. It's all attack and hit — without any of the smear.



### DM6 Kick Drum Mic

The DM6 supercardioid condenser sounds perfect right out of the box but it's versatile and powerful enough to take whatever creative EQ that you want to apply for flavour.



### DM20 Snare and Tom Mic

A small diaphragm condenser with a staggering max acoustic input of 150dB SPL. An incredible transient response delivered with each hit. Mount directly to the rim.

Discover the full range of Earthworks Microphones  
 02 9659 7711 | [sales@audiobrand.com.au](mailto:sales@audiobrand.com.au) | [www.audiobrand.com.au](http://www.audiobrand.com.au)







### ETC PAR jr

ColorSource PAR jr is the newest addition to the affordable line of ETC fixtures. A perfect complement to Spot jr, PAR jr boasts a similar feature set and includes a four-colour red, green, blue and lime array. The fan-free, convection cooled design makes this luminaire ultra-quiet. This wash light is available in two array options; the Original array provides subtle pastels and beautiful white light to enhance skin tones, while the Deep Blue array is for anyone needing more saturated, dramatic colours.

**Australia:** Jands [jands.com.au](http://jands.com.au) (02) 9582 0909

**New Zealand:** Jands [jands.co.nz](http://jands.co.nz) (09) 941 9780

### KRK ROKIT Generation Five

KRK's ROKIT Generation Five Studio Monitor is offered in three sizes; five, seven, and eight-inch. These advanced, active, two-way studio reference monitors feature three new voicing modes, an enhanced tweeter design, and a refreshed LCD. The monitors also feature 25 evolved DSP boundary and tuning EQ combinations that help minimise and correct problems in any acoustic environment. Additionally, the newly designed tweeter benefits from a highly damped acoustic silk dome diaphragm for improved phase performance and an extended frequency range (up to 40 kHz), while the refreshed, amber-coloured LCD DSP interface simplifies the calibration process with new tuning options.

**Australia:** Jands

[www.jands.com.au](http://www.jands.com.au) (02) 9582 0909

**New Zealand:** Music Link

[www.musiclinknz.co.nz](http://www.musiclinknz.co.nz) (09) 259 0068



# NEW GEAR



### Lightware Pro AV USB-C Cables

Lightware's full featured new range of USB-C cables include 10m active, 8m active, high power 2m and unique micro Coax Passive 5m options. These USB-C extender cables bring literally more flexibility and durability into AV projects, being compatible with all major operating systems and offering SuperSpeed data rates for 4K video transmission.

**Australia:** Lightware Australia Pty Ltd [lightware.com](http://lightware.com) (02) 9188 0658

**New Zealand:** Pacific Audio Visual Ltd [pacificav.co.nz](http://pacificav.co.nz) (09) 947 5230

# NEW GEAR



## Shure MV7+

The MV7+ Podcast Microphone is the evolution of Shure's hybrid XLR/USB dynamic microphone. New features include a multi-colour LED touch panel, real-time denoiser, digital plosive filter, improved Auto Level mode, onboard reverb and hybrid XLR and USB-C outputs. Unlock the full potential of the MV7+ microphone through the MOTIV Mix software interface which allows users to customise the LED panel, access up to five multi-track recording and routing channels, and fine-tune settings like sound signature, gain, and more.

**Australia:** Jands  
jands.com.au (02) 9582 0909  
**New Zealand:**  
nsl.co.nz (09) 913 6212

## Lightware OPTX

The OPTX family of products is a version of Lightware's SDVoE-based TPX Series point-to-point extenders that deliver HDMI 2.0 signals up to 4K@60Hz 4:4:4 with ultra-low latency (less than 0.1ms) over a single-mode or multi-mode fiber optics cable up to 300 meters or 10 km, depending on the SFP+ module used.

The HDMI-OPTX-TX200AU2K and HDMI-OPTX-RX100AU2K extender pair have composite USB 2.0 transmission, adding the ability to connect remote USB-HID devices to a host computer through an extender pair. The devices also have transparent USB 2.0 transmission that provides support for various types of USB 2.0 devices like webcams, microphones, or touch displays.

**Australia:** Lightware Australia Pty Ltd [lightware.com](http://lightware.com) (02) 9188 0658  
**New Zealand:** Pacific Audio Visual Ltd [pacificav.co.nz](http://pacificav.co.nz) (09) 947 5230



## Event Communications



When your event needs more than a few headsets, talk to The P.A. People!

Draw on over twenty years of wired intercom expertise and the world's largest Clear-Com rental inventory to create the right solution for your next event.

Our inventory includes FreeSpeak II - the original network-based Full Duplex solution from Clear-Com, scalable to cover any event or venue, either as a stand-alone system or fully integrated with a wired comms system.

Contact us to discuss your next event!

Radios | CCTV | Wired Comms | Wireless Comms | SPL Net

[papeople.com.au](http://papeople.com.au)





### Magewell Expands Director Mini

A new free firmware update to Magewell's Director Mini has added over two dozen new features and improvements. Headlining the list of additions is dual-channel instant replay. Two concurrent replays can be captured from Director Mini's program output or HDMI, USB or NDI inputs. The replays can be played back individually or side-by-side at full speed or slow motion with user-specified stinger transitions, and can be saved as highlight recordings for future use. Other new features include HTML graphics support, network bonding functionality, direct integrations with OBSBOT's Tail Air AI-powered PTZ streaming camera and Tiny 2 webcam, OSC support, support for NDI High Bandwidth input sources, the ability to select a live social media comment to overlay and an expanded API for third-party integration.

**Australia and New Zealand: Corsair Solutions**  
[corsairsolutions.com.au](http://corsairsolutions.com.au) +61 (0)3 9005 9861

### PROLIGHTS AetherBox LITE

AetherBox LITE is a single-universe wireless CRMX transceiver designed to enhance lighting control in professional installations while staying within budget. Its compatibility with W-DMX and LumenRadio CRMX protocols ensures steady, interference-free signal transmission, crucial for the success of any lighting setup. The AetherBox LITE offers various power and signal transmission options, including In/Out connections via panel-mounted connectors or terminal blocks. Its innovative design supports installation on tracks equipped with data buses, facilitating seamless signal transmission adaptable to various applications.

**Australia: Show Technology**  
[showtech.com.au](http://showtech.com.au) (02) 9748 1122  
**New Zealand: Show Technology**  
[showtech.com.au](http://showtech.com.au) (09) 869 3293



# NEW GEAR



### KLANG KOS 5.5 Operating System

Immersive in-ear monitor mixing system pioneer KLANG:technologies has launched its newest operating system, KOS 5.5, which is now available for free download at [www.KLANG.com/kos-5-5](http://www.KLANG.com/kos-5-5). Packed with features, the new OS and its corresponding KLANG:app software simplify and significantly reduce setup time for all of KLANG's second-generation devices, including :konductor, :kontroller, and :vokal, as well as DiGiCo's DMI-KLANG card.

**Australia and New Zealand: Group Technologies**  
[grouptechnologies.com.au](http://grouptechnologies.com.au) or +61 3 9354 9133

# THE CARAVAN HITS THE ROAD

**It's the end of the road for this iconic Victorian venue – apparently. According to the managers and promoters, The Caravan Club's April 2024 gigs represented the last shows. But not everyone's convinced.**

In early April the iconic Caravan Club, one of Victoria's most successful and critically acclaimed live music venues of the last 20 years, took its final bow, finishing up with back-to-back sold-out shows that featured a cavalcade of artists hand-picked by its owners, Peter Foley, Mary Howlett, and Sue Keys.

The long list of musicians included Mark Seymour, Vika and Linda Bull, Lisa Miller, Mick Thomas, Rebecca Barnard, Kutcha Edwards, Adalita, Susanna Espie and many others, all brilliantly supported by a fantastic house band led by Shane O'Mara. While these familiar faces were the stars of the show this particular night, everyone, including myself and Damien Young (who was mixing front of house on the day), sensed we were humbly representing a cast of thousands who'd previously graced the Caravan Club stage either technically or musically over the last two decades. The punters felt the same... in the end, we were the lucky ones able to bear witness to this last hoorah.

The two shows, which were held at the Archies Creek venue barely an hour apart, sold out in minutes, leaving hundreds more loyal Caravan Club regulars wishing they'd acted faster to secure the hotly sought after tickets. Could we have staged a third? Possibly. But as Pete, in his inimitable style, wryly quipped recently over a coffee while discussing plans for the future of the venue: "We couldn't do a third show... we didn't want to kill ourselves in the process!"

As it was, Peter and Mary did their best to accommodate more than 900 patrons on the day, who happily squeezed into the Archies Creek venue to be part of these cathartic and historic gigs. Dozens more peered over the fence from outside – a thing I'd never witnessed before at Archies Creek. To see 60-year-olds squinting through holes in the fence like teenagers was quite a sight to behold – it was a mild-mannered riot of the middle-aged variety.

## The End?

I've been involved in the Caravan Club for a few years now, which some might say makes me a veritable Johnny Come Lately to the family, even though, in truth, it was the Caravan that came to my town, not the other way around! In that time, I've mixed and stage-managed countless gigs on all three stages at the venue:

the iconic outdoor stage, the indoor pub, as well as next door at Archies Creek Hall, which the Caravan Club fitted out a few years ago with Brett Doig's Meyer Sound PA and an Allen & Heath SQ7 console. I've become good friends with Pete and Mary over these last few years, as well as mates with the wider community of musicians and co-workers, many of whom have taken up residence in Archies Creek itself. Indeed, there are probably more musicians per acre in Archies Creek nowadays than almost anywhere.

It felt more than a little emotionally charged then, walking into the Caravan Club with my kit bag for seemingly the last time in its current form. Everyone was feeling the weight of the occasion: the staff, the musicians, and especially Peter and Mary. The stage prep felt more like a family reunion than a gig, with everyone milling about hugging one



Susanna Espie





another. Indeed, soundcheck felt more like an inconvenience at times than a necessity, as I politely pushed to get the final soundcheck over the line before doors swung open and the punters poured in. Backstage was no different, with everyone embracing like long lost relatives, sharing fond memories of all three iterations of the Caravan Club.

The gigs themselves were a genuine celebration of the Caravan Club and its management. Long-time friend of the Caravan, Ian Bland MC'd the gigs in his consummate comic style, kicking off proceedings with an informal Welcome to Country followed by some of his hilariously iconoclastic poetry. The punters were on their feet most of the night, dancing as only (mostly) middle-aged white people can. Everyone had a grand old

time, rocking and rolling with the waves of emotion that poured off stage with every new act. There were heartfelt speeches from all the artists – Mark Seymour, Linda Bull and Tracey Miller in particular – with everyone essentially recounting the same tale: of how supportive Peter, Mary, and Sue had been of live music over the years, and that this day genuinely marked the end of an era.

By the end of the night we were all exhausted, particularly the musicians involved who had all performed twice. We packed up in the usual way, with musos scattering into the crowd to sign autographs, although this time, with every lead I coiled and mic I returned to the drawer, I couldn't help but ponder when they might see action again.

## But Is It?

So, what now for the Caravan Club, which has promoted countless acts over the last two decades? Is it really the end?

Maybe, probably, possibly, or not... I have my doubts.

Pete has form on this flip-flopping, of course. He's closed the Caravan before, though perhaps not quite with the same determination as this time around. But even in the relatively short time I've known him he's often insisted that "Next month will be the last gig..." only for 100 more to then get added to the calendar.

So, will this time be any different?

"Absolutely," insists Pete when I light-heartedly press him on the matter. "We can't have sell-out gigs like that and then just turn around and reopen! We're done. From now on, if we want to put on a small gig at the pub, or at Archies Creek Hall, or possibly do a little festival in the town, we can do that without having to reopen the venue full-time! And it's not just about me either; I couldn't put Mary through all this again... she didn't sign up for this in the first place! She's been a total trooper over the last few years, that's for sure, but at our age we just can't survive the grind of organising countless gigs and managing the venue as well. It's just too much."

Fair enough too. I don't know how they've done it, to be honest. It's a hard, relentless slog that's nowhere near as glamorous as people make out. The nights are very long, exacerbated further by the Archies Creek Caravan Club being a regional venue, which has meant that



Vika and Linda Bull



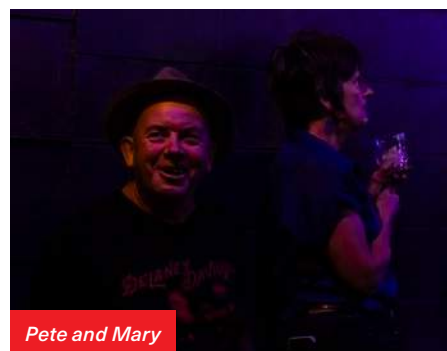
*Pete's farewell*

half the time bands have stayed at the pub, often partying 'til late, and then demanding breakfast the next day. That's a lot of work... and a lot of seedy musicians.

But then, only yesterday, Lost Ragas played another smaller gig inside the pub at The Caravan, and next week there are two more gigs slated... so what's going on? Are cracks in the façade already starting to appear?

According to Pete, "No! We're gonna buy a campervan – not a caravan, coz I don't know

how to reverse them! – and hit the road for a while. When we get back, we're going to promote shows around the country instead, under the banner "Caravan Presents..." rather than run a regional venue. We'll stay here and make this our home rather than a pub, and still do small gigs here and there, but for the foreseeable future, we're not going to be running the place as a regional pub. We're gonna make the main bar our new lounge room!"



*Pete and Mary*

**ELATION**

PROTEUS  
EXCALIBUR



**BRIGHTEST IP65 FULL-FEATURED BEAM FIXTURE EVER!**

Incredible light output • Sky motion automated searchlight system • Fully weatherproof

**ULA**  
GROUP

CONTACT OUR TEAM FOR A DEMO AUS 1300 852 476 | NZ 09 218 6532 | [info@ulagroup.com](mailto:info@ulagroup.com) | [ulagroup.com](http://ulagroup.com)





L-R Adrian Schiller, Howard W. Overshown, Aaron Krohn

## d&b's Soundscape helps defy the laws of physics

The Lehman Trilogy is a three hour, three-handed epic piece of narrative theatre, telling the story of the Lehman dynasty, a family that arrived in the USA from Germany in 1844. Starting out as clothing retailers in Alabama, they become traders in cotton (profiting from slavery), moved to New York after the Civil War, become futures traders, and eventually transform into the investment bank that collapsed in 2008, triggering the global financial crisis.

The UK's National Theatre and Neal Street Productions show is based on a radio play and then novel, originally written in Italian by Stefano Massini. The text was adapted by Ben Power, and the production is directed by Academy, Tony, and Golden Globe winner Sam Mendes. Set design was by Es Devlin, an award-winning multidisciplinary artist and designer.

Considering that the Lehman family spent generations indulging in the type of capitalist practices that were unethical, the story humanises multiple generations of Lehmans, with all characters played by just three

outstanding actors. The performance I saw in Sydney's Theatre Royal in March featured Aaron Krohn, Howard W. Overshown, and Adrian Schiller, morphing effortlessly between what amounted to almost 70 characters over three one-hour acts, separated by two intervals.

### Vale Adrian Schiller

*As The Bard said, "Life's but a walking shadow, a poor player, that struts and frets his hour upon the stage, and then is heard no more." Little more than a week after returning from the Sydney run, the exceptionally talented Adrian Schiller, who shone as Henry Lehman, died suddenly aged 60, ending a long and acclaimed career in film, television, and on stage. Though it is no comfort, I believe he bowed out after a triumphant performance.*

If I hadn't been there explicitly to experience the sound design, I wouldn't have noticed the show's actors were amplified. The Tony and Olivier-award nominated sound design by composer Nick Powell and sound designer Dominic Bilkey is the holy grail of

sound in theatre; it's so perfect, you don't notice it's there. It's all the more an incredible achievement when you notice that the performers act inside a revolving glass box that is only open on two sides.

When the box revolves, the actors continue to speak to the audience straight through solid glass, and still sound exactly the same. Even though I spent almost ten years mixing theatre, it took me a slightly embarrassing amount of time to notice what was happening. As soon as I did, I couldn't wait to talk to Dominic Bilkey to find out how it was done.

"It is a combination of ZacTrack trackers on the actors and set, d&b Soundscape spatial mixing, and line-by-line fader mixing by the board operators Katie Long or Elliot Wallis," reveals Dominic. "The acoustic of the glass box is quite interesting as well. You get reflections; you've got the curve of the upstage LED video wall, and reflections of the glass walls and ceiling. The acoustic is quite coloured, and interesting challenges exist in that space. On the desk, which is a Yamaha Rivage PM5, there is a lot of dynamic compression working very

hard in specific bands. If you look at the compressors when they're working, the sound tech in you thinks 'this looks really, really wrong'. But it is right, because what you're doing is counteracting the glass."

In term of actor microphones, cast members wear either Sennheiser MKE1s or DPA 6061s, depending largely on their hairline and how the Sound 2, Eliot Wallis could best hide them. Transmit and receive is via Shure Axient Digital.

I admit to Dominic that I couldn't perceive the change in timbre or volume when, mid-speech, a full glass wall and ceiling would pass between the actors and my ears. "As a sound designer, that's very satisfying to hear," says Dominic. "When we were on Broadway, the sound position was at the back of the auditorium. At one point, a woman next to me in the audience noticed the same thing, and said to her husband 'How does that sound the same? They were behind the glass!' and her husband, without missing a beat, said 'it's acoustically transparent glass.' I almost died, he was so confident; it was perfect!"

Having already been tipped off that Lehman was a d&b audiotechnik design featuring Soundscape spatial processing, I immediately noticed the distributed system throughout the theatre. There were seven hangs of d&b A-Series across the proscenium, augmented by V Subs, with d&b E6s as front fill. A combination of d&b E6s, E5s, and E4s were under balcony fill.

"There were also d&b B22 subwoofers upstage, mainly for low end sound side effects during the Civil War sequence," Dominic outlines. "There are a pair of d&b V7Ps overhead, and there are speakers in the ceiling of the box for monitoring. In some sequences, we have to send the radio mics to the speakers in the other rooms as the stage rotates so the actors can hear each other. All up, there's 112 outputs. The rig was a bit of an amalgamation, because *TINA, The Tina Turner Musical*, had been in there just before us. We translated a lot of the design across then changed the main PA at the front for Soundscape."

The addition of d&b Soundscape processing through the DS100 Signal Engine has been a huge advantage when touring the show. "The original 2018 production at National Theatre's Lyttelton Theatre wasn't Soundscape," explains Dominic. "It was an LCR d&b T10 system and a complex matrix of panning and delay algorithms in Yamaha DME64 open architecture DSP processors, with a number of them cascaded together. Because the front arrays were hung low enough, everybody was in their coverage, so it was quite successful."

Then the producers announced that show was going to do a run at The Armory in New York. "The Armory is an ex-Army drill hall that's a block long by a block long; it's enormous and it's notorious for acoustics," Dominic continues. "The width of the seating bank was three times wider than the Lyttelton Theatre, so three arrays weren't going to cover everyone. There's a long RT time in The Armory, so then you need delay lines, and then you know LCR is going to be a real challenge. So we made the decision to use Soundscape, which in truth had only just been released. We turned up in New York and put the show into one of its most exclusive venues, having never used Soundscape. As it happened, it worked! And we learned a lot, very quickly!"

It's testament to Soundscape's workflow that Dominic and Nick Powell were able to achieve this in such a short amount of time. "There was a moment at the dress rehearsal when I noticed that nobody had mentioned the sound," Dominic divulges. "No one had said they couldn't hear anybody, bearing in mind this was in a massive drill hall. The venue had appointed a consultant sound designer familiar with the space to help us with the intelligibility. They came in, sat through the dress rehearsal, walked up to us afterwards and said 'You don't need our help' and that was the last time we saw them. When the show started its run, we had a lot of older audiences asking for assisted listening devices before the show. A lot of them were handed back at the first interval."

New spatial workflows and capabilities require new tools, and Dominic has been creating them. "Myself and a partner, Jack Lord, have written a piece of software called 'Atlas', states Dominic.

## WE HAVE YOUR EVENT **BACKDROP** SOLUTIONS



### OUR BRANDS:





"It allows us to reprogram in a pallet-based reference system. For example, there's a set of speakers that are above the glass box, which point straight down into the front three rows. Every time the glass box revolves, we found that once the glass is in front of the acoustic source, the image would drop into the front fill. As the glass comes back, the image lifts back up as you get the actor's acoustic source. So, we added fills that are automated via the ZacTrack tags. As the box revolves, they tell the software that it is revolving, and then that automatically turns the fill speakers on. As the glass passes, it gives a vertical Z-value back to the front row. As the box opens up, and the

glass disappears, it turns down again. We can then apply that to every single revolve cue. Doing that traditionally would be reprogram, reprogram, reprogram, reprogram. Using Atlas, we've got one pallet, and the software calls that routine every single time it detects that the cube is revolving. It just tracks through the shows so the operator doesn't have to hit 'go' every time the revolve happens."

It's made everything about operating this vast show easier. "The original show file was around 300 positional cues, 200 sound effect cues, and line mixing; it was quite a physical feat for the operator," admits Dominic. "Now,

ZakTrack data goes into Atlas, and takes away some of that 'manual-ness'. The thing we've learned is that if you have the right tools, you can do lots of things very, very quickly. We are making system changes based on things that happen. For example, when the glass revolves, the front fills fade up by one dB, for vocals only. It's automated; it just happens. With the DS100, you have access to every parameter, and you can change them live. It's now a question of how adventurous you are feeling."

In the more physical realm, Dominic and Jack have developed solutions to make bump-ins easier. "It's interesting to develop tools and



"Bringing Soundscape into the show has been a joy because it means it's scalable"

Aaron Krohn



L-R Aaron Krohn, Howard W. Overshown, Adrian Schiller



Cat Beveridge, Howard W. Overshown



L-R Howard W. Overshown, Aaron Krohn, Adrian Schiller



L-R Howard W. Overshown, Aaron Krohn, Adrian Schiller



L-R Aaron Krohn, Adrian Schiller, Howard W. Overshown

ideas to make the spatial workflow possible," illustrates Dominic. "Because there are a lot more speakers, and measuring where the speakers are in a space takes time, we've developed an app called 'Measure' that takes the trigonometry from a laser measure. You just point and shoot, and it updates the d&b ArrayCalc software file. These are the tools we need, because you can't spend four hours measuring speakers; you've got to do it in 45 minutes."

Nick Powell's compositions, background music cues, and sound design feature a live pianist downstage prompt side, in addition to recorded cues and FX. The adoption of Soundscape has changed how they are approached in the production. "It's been great bringing Nick Powell on this d&b Soundscape journey," enthuses Dominic. "Some of the sound effects have evolved into object-based mixing rather than being left-centre-right as originally designed. I've learned a lot from Nick through the process as well, because I'm not a musician. Working with the pianists has been fantastic because you get an appreciation for the intricacies of what you can do with just a single piano."

"Bringing Soundscape into the show has been a joy because it means it's scalable," concludes Dominic. "You can go from The Armory, to Broadway, to the Ahmanson in LA, which is a massive space, but you can maintain the intimacy of connection with the dialogue. The show is just three people telling a story. It is epic in scale, but ultimately, it is narrative storytelling. You can succeed putting it into a very big venue because with Soundscape, you maintain the intimacy through localisation. Audiences don't perceive a 'traditional' PA and Soundscape in the same way. It's a cool system."

<https://www.flamingosoftware.co.uk/>





# GET BACK TO WHERE YOU ONCE BELONGED

**Too many of us start out playing music with stars in our eyes, only to then ditch our instruments in favour of a new life in the wider audio industry. Meanwhile our instruments lie forgotten in a closet somewhere, trapped in their road cases, rusting and leaking battery acid. Let's open them up and turn them back on before it's too late!**

This article goes out to all the adults among the CX readership who grew up playing music, but who now mostly only talk about it, sell audio gear, produce music for others, or work in a bank.

If you still own the musical instruments you once played, and still contemplate the day when you might pick them up again, today is that day. The time has come.

Now I know this idea seems preposterous. Frankly, I can already predict your response: "Andy, I wish I could, but I just don't have a spare second... let alone today!"

I hear you, really I do, but I suspect it's not true. In most cases we grow separated from our instruments for a multitude of good reasons, but often the road back to them is a quagmire of bad excuses, questionable logic, irrational fears and unrealistic expectations.

But it shouldn't be this way. Getting back to playing an instrument shouldn't be so hard, particularly if, deep down, you still identify with that person who once walked so confidently on stage and played music to 10, 100, or perhaps even 1000+ adoring fans, or made amazing synth patches and home studio recordings that sounded great but never saw the light of day.

For anyone who's become estranged from their collection of beloved, dusty, and in some cases dysfunctional instruments, consider this article the first stepping-stone back to the creative life you once enjoyed.

But don't misunderstand my logic here. I'm not for a moment suggesting you go back in time, regress to the mindset of a teenager, or try to rekindle the old band chemistry. I'm simply proposing getting you, the adult, back in touch with your musical instruments, with (dare I say it) no strings attached or grand plans in place for conquering the world. This is simply an exercise in enjoying the exploration of sound

for its own sake, rather than proving to others what you're capable of, how talented you are (or once were), or why you're going to be 'HUGE!' this time around. This is an ego-less trip with no destination, for which at least the capacitors and switches in that old synth of yours will be profoundly grateful.

## Million To One

While I know it seems there are a million different reasons why we grow apart from, and eventually stop playing, our musical instruments, in truth there's typically only one... we never actually stop. For most musicians, our playing days never formally end. At some point along the way we simply put down our guitar, switch off those (now vintage classic) synths or pack up that drum kit, and as fate would have it, never pick them up again. It's only when we look in the rear-view mirror later that we're able to pinpoint a specific moment in time and say, "Wow, actually that was the last time I ever played my Prophet 5... if only I'd known then that it would be the last time I turned it on..."

Somehow time just separates us from our creative life like slices of bread, and before we realise what's happened, a year, or a decade has gone by... sometimes three!

Consequently, there are some very powerful mixed emotions at play around this separation anxiety that can make picking up your instruments again feel harder to contemplate than quantum physics. Eventually this apprehension can develop into a total mental block, after which time, the prospect of ever playing your instruments again starts to feel like a desperately remote concept.

It's indeed quite common for people to feel genuine dread around the prospect of opening their old road cases. Often that old guitar, your favourite '80s poly synth, or your first

ever classical wind instrument triggers so many nostalgic feelings and memories from the time when it was played, that the object behaves more like a time portal than a musical instrument. It's a confronting and often-times debilitating feeling that many adults run a mile from. Being confronted with the passing of time by an onrush of memories, discovering in that same instant just how much time has elapsed since you last played music – before life got in the way – can be a jolting, unpleasant experience. No wonder so many people fear opening up the old road case again to see what's inside.

Let's confront it together then shall we... and make it easy on ourselves.

## Step By Step

I propose doing this in small steps with no expectations. This means: no big plans, no talking up the idea with others, and definitely no mouthing off about how you're going to "embark on a new solo album" or "continue where the band left off." This is your ego talking – don't give it a sniff. Keep the process simple, keep things on the down-low and don't, whatever you do, put pressure on this to 'be something'.

Not everything has to be something.

And if you can, try to make the experience all about the here and now, not the past. We're trying hard during this exercise to keep our minds on the present, not the past or indeed the future. This is all about being in the moment, and to hell with everything else. You don't want your adult brain racing off ahead to plan recording sessions, distribution deals or band names. It's all about you and your instrument, remember? Not all the palaver that you so quickly want to add to the scenario.

## Shut Up & Setup

If you can, find a space in the corner of a room somewhere, and simply setup some of the old instruments. If you can turn them on, tune them up, or dust them off, depending on what the instrument requires, do that first. The key here is to keep it simple, and again, avoid getting your ego involved or adding too much technical complication at first.

For instance, don't – whatever you do – try to setup a complicated MIDI system or reboot your 20-year-old computer looking for long lost multitrack files, or you'll immediately get tangled in a web of software mayhem or upgrades to X, Y and Z. This will spell certain doom for your fragile spark of interest!

And don't allow this new foray into music exhaust you either, or it will only turn this new musical experience into yet another chore, and we don't want that! As adults, we have plenty of those already; we don't need another added to our list.

This is all about taking a break from the world around you and immersing yourself in the sounds of the instruments, without the whole thing turning into a big deal. We want this experience to stay small; contained both physically and emotionally, so that it's enjoyable, and dare I say it, fun.

## Dust Off Or Recap?

If it becomes clear that your instruments need a service or a setup, send them off to a reputable repairer the moment you spot a problem (I know lots of the best service techs, too, if you need names). You don't want to start playing with something that's going to kill an instrument stone dead or start a fire. Instruments that have been stored away for decades, in particular, will often need a once-over from a service tech, so get that done if something starts misbehaving. Once the gear is back and given the green light, you can start noodling without some part of your brain feeling concerned that something's wrong.

In the end, life is too short for the capacitors in your old synths to die from sheer neglect, or the old battery to leak onto the circuit board and kill it. Don't add your name to the long list of people who have contacted me over the years to say that they suspect their old instrument won't turn on anymore.


Play your instruments for the sheer enjoyment of playing whenever you can from now on... and remember: no expectations. Leave your ego at the door. If getting back into it eventually leads to something more expansive or collaborative later on down the track, well and good. Just don't start with that expectation. Conversely, if later you decide that the instrument you once prided yourself in owning is no longer your thing; that you feel no attachment to it whatsoever, at least this discovery session will have dissolved the feeling that a ghost lurks in your closet, and every time you go near it you feel haunted by your musical past. If that's the case, maybe you can give your old instruments to your kids (assuming you have any), or you can just sell the instruments on.

Just don't leave them in the closet. They don't deserve to die alone in a road case.

Andy Stewart owns and operates The Mill in Victoria, a world-class production, mixing and mastering facility. He's happy to respond to any pleas for pro audio help... Contact [andy@themill.net.au](mailto:andy@themill.net.au) or [www.themill.net.au](http://www.themill.net.au).







# The National Returns to NZ on the *Tightest of Timeframes*

Brooklyn-based indie rock band The National returned to New Zealand in February, playing back-to-back shows at either end of Te Ika-a-Māui, first in Auckland and then Wellington. Oceania took on full production, supporting the band's return to international touring, following the release of two acclaimed new albums.

James Mackenzie, General Manager of NW Group NZ, recalls, "It was great to hear from Rob Jefferson [founder of Solid Entertainment] about his upcoming tour with The National. Oceania and Solid Entertainment have a great working relationship going back a good few years. We have worked with Rob on numerous shows and tours."

Rob contacted Oceania looking for a sound, lighting, and vision package, "It developed into a full service production management role with Oceania taking care of all aspects of the local production. We organised the equipment, both the touring and local loader crews, venue liaison, rigging sign off and a comprehensive logistics plan. Brent Greenwood took on Production Manager."

As this was the start of an Australasian run and the first shows for the band in a few months, The National crew wanted to spend a day in a rehearsal studio to go through their gear and get everything sorted for the start of this run. Brent takes up the story, "We provided a rehearsal studio and production office space from our Auckland based facility and managed the logistics of receiving the touring gear. The rehearsal day went really well and it was a great chance for the local crew to meet the touring crew and put the months of pre-production into action. The National crew were able to do a full setup of the stage system and integrate their touring gear with the locally supplied equipment."

The biggest challenge for Brent and Oceania was that Auckland and Wellington were back-to-back shows, "It meant an overnight drive across the Desert Road for the production, which consisted of three semi-trailer trucks, courtesy of On Tour Logistics, who handled the Oceania equipment, and Production Transport Services, who took care of The National's touring freight. I carefully devised a plan of sending a truckload of gear from Auckland to Wellington the day before the Wellington show to prebuild some of the rig on the show day before the overnight trucks turned up. Emil from The National crew, along with Deen and Don from Oceania, flew to Wellington once the Auckland rig was all going to manage this prebuild phase of the day. This meant both

entech

*i whakaitihia,*  
*i whakahonoretia*  
**RETURNING 2024!**

**Join us on the road as we visit Auckland,  
Wellington and Christchurch next August**

Free registration now open:  
<https://regonsite.eventsair.com/entech-nz-2024/regnz>

[Entech-roadshow.com](http://Entech-roadshow.com)  
[Exhibit@entech-roadshow.com](mailto:Exhibit@entech-roadshow.com)



For more information, please call +61 408 498180 or email [exhibit@entech-roadshow.com](mailto:exhibit@entech-roadshow.com)



Photo Credit: Daniel Pearce



crews walked into a venue with motors floating ready for the rig to be attached and flown."

The TSB Arena tested the crew in the way only a sports stadium can and Brent appreciated the local knowledge of the Oceania Wellington office: "The show is visually stunning with a meticulously designed and operated light show, backed up by epic visuals on the LED screen. Getting the right trim heights in the Arena meant the riggers needed to pay particular attention to getting as much height out of the rig as possible."

The audio techs also got to strut their stuff, "The asymmetric seating of the TSB Arena provided the audio team with a little hurdle to jump in terms of different box counts for the flown outfills in the venue. Using the d&b ArrayCalc software, Pou and Jacob were easily able to factor this into their PA design and the end result was a fantastic sounding show. Making use of the ArrayCalc software as part of the design process makes deploying a system under very tight time frames a lot more manageable. The points, box angles, and trim heights onsite match the ArrayCalc design so all that is required on the day is to check your time and phase alignment, do a tune and hand over to the touring engineer to work his magic."

The post show logistics required focus too, "The National's next show was in Brisbane on the Wednesday after Sunday's Wellington show. All the crew hustled to get the rig down, in the truck and back across the Desert Road, all in good time to allow the touring gear to make it back to Auckland on Monday morning."

Photo Credit: Daniel Pearce

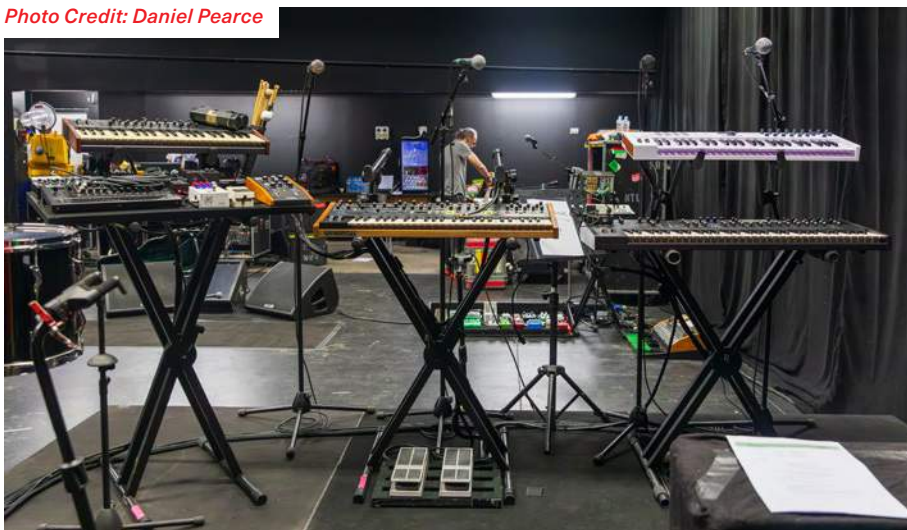


Photo Credit: Daniel Pearce







Photo Credit: Chris Zwaagdyk

The end result of Oceania's hard work and expertise was a nearly sold out show in Wellington that captivated audiences, that sounded and looked amazing, and had great reviews. James sums it all up, "It gave the punters a great night out which is the driving factor of what Oceania does on a daily basis."

For James and Oceania the pride comes from being able to take a phone call, some dates, and a rider, and put together a couple of shows that went off without a hitch.

*"Brent pulled together a great team to deploy the shows, and with some careful planning around logistics and gear movement, he was able to take a lot of the challenges of back-to-back shows out of the picture."*

## The Gear

### Audio

d&b J-Series with D80 amps, J-Subs / J infras, Q7 fills, Dolby Lake LM44s, S6L consoles, PSM1000 IEMs, Shure Axient radio mics

### Lighting

Robe BMFL Spots, Robe BMFL Blades, Robe Spiiders, Martin MAC Auras, GLP X4 Bars, Ayrton Magic Panels, GrandMA3 (backup console), ColorStrike M Strobes

### LED Screen

12m x 5.5m Absen 2.9mm screen

**NovaStar controller** (all other control touring from The National)

### Rigging / Staging

40 motors comprising a selection of 0.5T, 1T and 2T CM Lodestar motors, F34, F44 and F54 Truss elements, Showquip rolling risers

## NZ Touring Crew

James MacKenzie - Account Manager  
 Brent Greenwood - Production Manager  
 Pounamu O'Brien - Audio HOD, System Tech  
 Cathal McDonagh - FOH Tech (AKL show)  
 Arni Agar - Monitor Engineer  
 Matt Faccioni - Patch, Stage  
 Jacob Burn - FOH, System Tech (WEL show)  
 Ash Scott - Lighting HOD, System Tech  
 Lucas Story - FOH Tech  
 Josh Swain - LX Tech  
 Deen Abu Bakar - Vision HOD, LED Rigger  
 Geof Walsh - Vision Tech  
 Michael Davis - LED Tech  
 Don McCallum - Rigger  
 Jacob Eliason - WEL Production Assist



ALL TERRAIN STAGE



ULTRA STAGE



MOBILE FOLDING STAGE



LITE STAGE

## transtage PORTABLE STAGES

We offer a wide range of high-quality, user-friendly portable stages for events of any scale. Contact us for a quote today.



CONTACT US

Phone:  
**1300 712 066**

Email:  
**info@transtage.com.au**

Website:  
**www.transtage.com.au**



# Barton Sound Systems' Track Record with Meyer Sound

**Auckland's Barton Sound Systems have been supplying top quality PA solutions to New Zealand for 50 years. With their roots in the rock'n'roll PAs of the 1970s and 80s, Bartons have evolved to provide PA and communications systems across government, education, transport and entertainment. No strangers to Meyer Sound's suite of world-class loudspeakers, Bartons have previously installed Meyer Sound Constellation acoustic enhancement systems in the Kiri Te Kanawa Theatre, Aotea Centre, Auckland and James Hay Theatre at Christchurch Town Hall.**

It was in the installation of Constellation that Bartons first encountered Meyer Sound's unique IntelligentDC system. Due to the large amount of loudspeakers in a Constellation system, they are installed using IntelligentDC, in which a composite cable carries 48V power and audio signal to each loudspeaker, combining the cabling advantages of 100V line systems with the power and quality of self-powered loudspeakers.

IntelligentDC installations take their power and signal from rack-mounted units that handle signal routing and power distribution. They come in two channel (MPS-482HP) and eight channel (MPS-488X) models, with built in remote control and monitoring via Meyer Sound's free Nebra software.

When approached to provide a PA to a large new gymnasium in Auckland's prestigious 115-year-old Baradene College of the Sacred Heart, Bartons EASE modelling and design work established that they needed loudspeakers that were small and lightweight, while having high power and wide dispersion. When considered with the fact that they needed to be rigged high above the gym in an absence of power and signal distribution, six Meyer Sound ultra-wide ULTRA-X23XP loudspeakers and USW-112XP fed by an eight-channel MPS-488X IntelligentDC supply were determined to be the solution.

"The solution's appeal was the power-to-weight ratio, very good signal quality, and extremely wide 110 degree coverage pattern,"

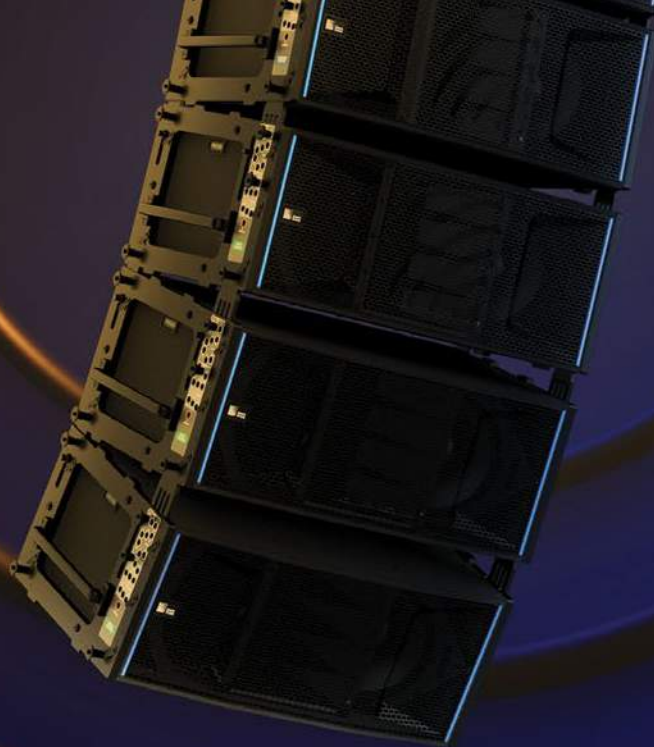
states Tony Wehner, Director at Bartons Sound Systems. "Being quite experienced with IntelligentDC installations, there was great appeal it not having to organise power circuits up in the very high ceiling. Sending power and signal down one composite cable reduces the need for coordination with other trades. It's saved on rack space, as we didn't need separate amplifiers. Due to the size of gym, low impedance cable runs to get up to the ceiling would have been unfeasibly long. It's really the best of both worlds not having to run mains power and low impedance cabling."

For IntelligentDC installs, Meyer Sound recommends Belden 1502R composite cable, which includes a 22 AWG stranded tinned copper pair for signal and an 18 AWG stranded tinned copper conductor for power. The MPS-488X uses intelligent switch mode power supplies, and every loudspeaker in the Baradene gym system has its' own individually controllable power and signal.

"The gym has two large courts, and we have two clusters of two ULTRA-X23XPs and one USW-112XP sub hung above the centre court areas," continues Tony. "Then there's another two ULTRA-X23XPs as delays facing the bleachers. It's a low-profile way of getting lots of SPL and intelligibility into this large room."



*"The solution's appeal was the power-to-weight ratio, very good signal quality, and extremely wide 110 degree coverage pattern"*



PANTHER

## An unparalleled pair.

Hear what happens when our lightest, most powerful line array is paired with the subwoofer that sets the standard for the best lows in the business.

You'll have to hear it to believe it.

[meyersound.com/panther](http://meyersound.com/panther)



2100-LFC





"As Baradene is one of the top schools in the country, we wanted high quality audio," adds Tony. "The small form factor and power to weight ratio was not just appealing sonically, but also architecturally. And as one of the most seismically active places on the planet, everything needs to be seismically engineered here in New Zealand. By keeping things lightweight, it definitely reduces the amount of seismic restraints."

Staying in the Meyer Sound family, Bartons recently chose an ULTRA-X42 loudspeaker solution for Mount Smart Stadium (also known as Go Media Stadium) in the Auckland suburb of Penrose. It's the home ground of the National Rugby League's New Zealand Warriors, and it's South Stand PA needed a refresh.

"Bartons have been supplying Mount Smart Stadium for 30 years," says Tony. "They have

an installed system for the permanent seating and portable PA for the open-air bleachers, which are scaffolding. They've stayed with temporary scaffolding because they need to be able to vary the depth according to the requirements of concerts and different sports codes. As it's a temporary structure with no roof and no rigging points, only firing audio into it up from the ground is possible."

The loudspeakers being replaced were coming to their end of life. They were also awkward and hard to lift. "We needed to replace them with something more modern," concedes Tony. "We were shopping around for a long-throw powered box, light enough for an easy two-person lift onto the tripods. The Meyer Sound ULTRA-X40 was the new kid on the block; high power, and small form factor, with rotatable horns that were 110° x 50° in the X40 and 70° x 50° in the X42. We chose the ULTRA-X42 for

the narrower dispersion for the long throw and got the weatherproofed option from Meyer Sound."

On game days, stadium staff bring out the six ULTRA-X42s and mount them onto custom aluminium stands. Custom made looms are plugged in, and a Bartons system tech checks that everything is functioning as it should. "The ULTRA-X42s are just the right size to sit in front of the dead-ball line signage. They angle up onto the bleachers, shooting 20 to 30 metres. Again, the Meyer Sound quality of build and their power to weight ratio are the two main factors in our decision to choose the ULTRA-X42s. We have a good track record using Meyer Sound products, and have never been disappointed."

[www.bartonsound.co.nz](http://www.bartonsound.co.nz)  
[meyersound.com](http://meyersound.com)



Prepping Baradene's gym for installation



Tony Wehner



ULTRA X-42 at Mount Smart Stadium

# THERE'S A NEW PLAYER IN TOWN

## JBL VTX A Series returns the brand to the big stages and riders

JBL launched their VTX A Series of premium line array loudspeakers at Frankfurt's PL+S in 2017 with the flagship A12 dual 12" element. In the years following, they've released the A8 dual 8" and A6 dual 6" elements, and seven models of complimentary subwoofers. Designed by JBL from the ground up, including the HF transducers, the VTX A Series is a generational change in sound for JBL.

As I've written many times about VTX A Series, this is not the JBL of the 90s and 2000s. Tonally, they are on par with any of the big-name rider-friendly line arrays. Their power to weight ratio is exceptional, and everyone who hangs one praises their rigging system.

Here in Australia, MadisonAV took on distribution of JBL's premium touring products back in 2022. Since then, they've been doing an exceptional job of introducing VTX A Series to the market, including to engineers like myself with a long history

of disliking the brand, and winning us over. They're doing such a good job that they won 'Launch Event of the Year' at the Harman APAC Tour Summit in Singapore, for their A6 launch event at Sydney's The Star in 2023.

MadisonAV's Head of Tour Sound, Peter Kubow, has been taking their extensive demonstration inventory to festival stages around the country and putting them to work. Both a system tech and FoH engineer, Peter has been letting production companies trial A Series on live stages with their reputations on the line, and backs his product 100%. At

every demo rollout, Peter and his crew are there to install and tune the system, ensuring the best results.

It's a strategy that is working. It's simple, but so few do it – get your product in front of the right people, let them use it in the course of their work, and trust the quality of the product to make its case. It's seen A Series appear on major events across the country since Peter joined MadisonAV a year ago. We talked to production managers and sound technicians about their experiences with A Series, and the feedback has been excellent.

## The International Perspective

**Rodney Houston, Director Tour Sound  
APAC, Harman Professional Solutions**

Working out of Singapore and servicing the whole region for JBL's parent company Harman, Rodney is in a unique position to view the rollout of A Series internationally.

"We've had a lot of success with A Series in South Korea over recent years," he divulges. "Artmix, who are one of, if not the biggest rental company in South Korea and are leaders in KPop production, came on board with A Series at the end of last year. New to JBL, ArtMix bought a massive inventory of A12 and A8 plus subs, enough to do a full in-the-round indoor arena. That's had a huge impact on the market, both in and out of South Korea, because they tour regularly internationally. They go to Australia, the rest of Southeast Asia, the States, and Europe. They've got around 30 engineers, and they

run multiple tours at once; it's a serious enterprise. Because Artmix invested, other rental companies that already had orders in increased them, while others put orders in for the first time. To see a company of that scale jump on A Series really spoke volumes as to the movement we're seeing in the market right now. South Korea's also a huge worship market. There is an ever-growing list of A Series installations in South Korean churches. The impact and the halo effect of that is already being felt."

"There is huge market share for JBL in the Indian tour market and we're seeing shows and tours come out of India and go around the region, including Australia. On top of success in the major markets, we've even got A Series systems into very remote areas in Asia, as far as Mongolia and Cambodia, that are doing tonnes of local festivals and some international shows."

"In the USA, Clearwing, who operate out of Wisconsin, Arizona, and Colorado, invested in a substantial amount of A Series. One

of the bigger festivals they do every year is the SummerFest in Milwaukee, which at one point, according to the Guinness Book of Records, was the world's largest music festival. It runs for three consecutive weekends with 13 stages, nine of which are JBL A Series. With a big festival like that, so many bands, artists, and front of house engineers experience the product, which really helps drive rider acceptance. For the third year running at Coachella, there has been an VTX A12 system in the Gobi Tent, thanks to Rat Sound who also recently installed a VTX A8 PA in The Roxy Theatre, a famous music venue on the Hollywood strip. In terms of touring, Sound Image, now part of the Clair Global family, have just finished a huge US tour carrying a full VTX A Series system for the The Trilogy Tour, featuring Ricky Martin, Enrique Iglesias, and Pitbull as rotating headliners as well as other tours including Heart which just left on tour this month."







# Rolling Sets Festival and Let the Good Times Roll Festival

Dec 2023, The Entrance NSW

"The VTX A system surpassed all my expectations," says Ryan Hazell of Roll In Production Services. "I was expecting it to be good but not 'that' good. We were able to compare it pretty much side by side next to the big German manufacturer's latest system on the main Rolling Sets stage. The VTX A more than held its own and covered the space beautifully with a perfect deployment. For eight A8s on the main hangs, I did not expect the fullness and quality of the sound image coming from such a small format PA. This is what makes the A8s so versatile; lightweight, small footprint and a huge sound. The A8s married perfectly with the A6 infills, the sonic signature was seamless between the two boxes. Those A6s pack a punch! The sub deployment was also super impressive, 10 G28 in array pattern and cardioid configuration. It's rare to get such even sub coverage around the entire audience area. There were so many comments, it definitely had the edge in this regard over the main stage."

"The clarity and efficiency is what makes this system stand out from the pack. The improved clarity means you don't need to run the system as loud to translate the impact to the audience. Pete Kubow was explaining the new driver technology and the super quick recovery time that translates into drastically improved transient response; more like a studio monitor. That is how I would describe the sound of the PA - the transient detail was something new to what I have experienced in a deployment of this size. You can hear the space between that is normally lost in a live setting."

"There were zero complaints received from any touring engineers with the system - this is rare! As we all know, us engineers love a good wing. The industry in Australia is dominated by a very few major brands and I feel engineers and production managers use this as a comfort blanket to specify on their riders. I feel after enough people use the VTX A here it will break into the holy grail of touring riders. The overwhelming positive feedback actually came from the festival promoters and the audience, noticing a drastic improvement on the stage from the previous year."

"I feel like there needs to be more players in the touring market in Australia and VTX A Series brings something unique. The Crown V rack takes care of all the processing you could need with a clean user interface. It sounds like there is heavy investment in R&D which makes me feel comfortable that there will be constant updates to stay relevant with emerging technology and user feedback. It's a clean system, well-thought-out with rigging, transport and storage. Most importantly it, sounds as good as anything out there. People are always going to have their personal taste in PA, but to me VTX A Series will match it with anything out there, giving me confidence to spec for future events."

Tristan Forbes is the production manager for Let The Good Times Roll Festival, and is similarly impressed. "The efficiency of the VTX A Series system was demonstrated to be outstanding. Whilst in operation, I visited numerous locations and found it sounded





just as clear up front as it did further back, including with changing crowd numbers. Feeling very confident that the VTX A provided clarity in multiple listening situations, I walked away with a smile on my face. I could feel the full impact of a full range of frequencies and levels up past the FoH mix position when the headliner was on. I glanced around FoH position to see what other people's reactions were like, and it was a dance party with everyone really enjoying themselves, dancing around as though they were front row."

"I know that a production supplier for this festival has enquired about having it on their next festival. They are happy to leave their existing PA in the warehouse and go with VTX A Series now. I personally had bands approach me to say thanks for the awesome sound on this stage, to which I had to redirect the appreciation back to the VTX A Series. Having bands walk away feeling as though their mixes were actually heard correctly note for note has made our job so much easier. The international acts walked away knowing they were definitely looked after out the front. Thats huge for us."

"I'd like to see VTX A Series on another few festivals to confirm what I already believe to be a real contender in the market of A-Grade PAs. I have heard numerous PAs handle all types of music in different ways over the years. With VTX A Series I was hearing extended, clear high frequencies when levels are pushed, an even coverage of sub frequencies, and both near and far field performance. I already have VTX A Series in mind for a few more festivals in 2024 where I know that the listeners will be expecting the highest levels of audio quality."







JBL A SERIES

# BIGSOUND

## Brisbane, September 2023

"I've been Production Manager at BIGSOUND for 12 years," says Eddie Gresack. "Last year, Peter Kubow from MadisonAV and I walked around and looked at different venues and talked about what would be a good fit for JBL A Series. We settled on Soapbox Brewery, which was a brand new venue for us and a brand new venue in terms of offering live music, plus Blute's and The Sound Garden, which had existing PAs, but I wanted to make this special and was looking at ways to improve what was already a good space."

"The JBL A Series rolled out very well. I was really happy with the way the system sounded in Soapbox Brewery, and both Blute's and The Sound Garden were both huge improvements over their house systems. Tim Roberts, who is production manager for Blute's, Black Bear Lodge, and The Brightside, liked the rig in Blute's and he definitely thought it was an improvement on what they have. He was impressed enough to carry on the conversation about perhaps outfitting Brightside Backyard with JBL A Series. The Soapbox Brewery people were thrilled."

It wasn't just the product that inspired Eddie's admiration. "I was also impressed by the fact that MadisonAV had their own crew come in. Peter Kubow and the crew installed each rig and were there for me. When they were bumping in Soapbox, which is upstairs, they asked 'Do you need any help with the other stuff that you are bringing in?' We had a monitor rig, front of house desk, and backline. They let us use their crew to bump in, which really helped, and is very cool. They are great staff with really good follow-through. It was very refreshing!"





# St Kilda Festival

## St Kilda VIC, 17-18 February 2024

The iconic St Kilda Festival in Melbourne's famed foreshore suburb takes over the entire area for a weekend in February. Local production company Light & Sound Solutions provide full production for six stages in total. One of these stages, the New Music stage, was graced with a ground stacked A Series system, installed, and tuned by MadisonAV's Peter Kubow.

"The PA did a great job of creating a nice rich sound across the listening area" comments Andrew Stanley, managing director of Light & Sound Solutions. "The size and weight are good, and I think A Series will fit into the market nicely"

"The rigging capability is great," he continues.. "It's all integrated, which makes it so much easier. We were ground stacked at the New Music stage, but whether it's hanging or ground stacked, you're using the same pins."

Having assessed the A Series' performance throughout the festival, Andrew is open to hearing more of it. "We're always looking for that new box," he explains. "In the recent past JBL hasn't been up there in the tier-one range of PAs. A Series is bringing them back into the market. It's a fresh look, fresh sound, and represents a return to form for JBL."





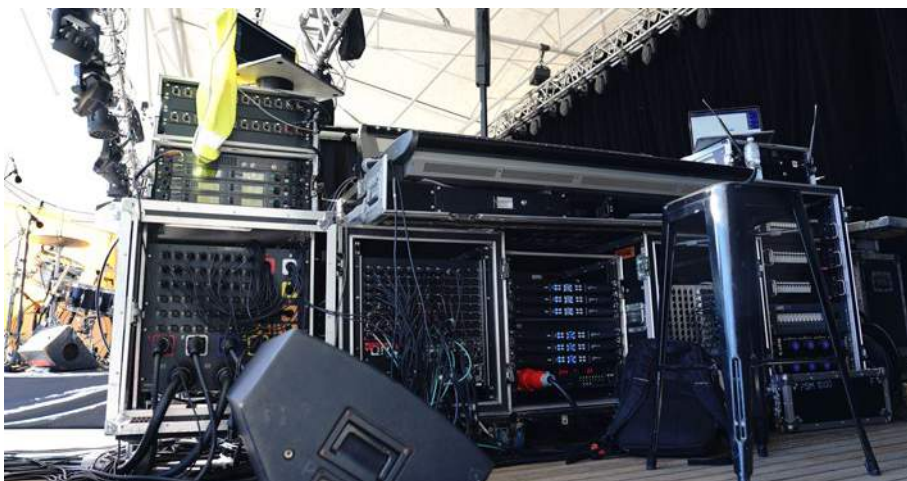
# Enlighten Festival Canberra

Hoodoo Gurus with Canberra Symphony Orchestra.  
10 March 2024

Marshall Cullen is a music industry veteran with over 30 years' experience both locally and internationally. He's handled FoH and tour management for Lloyd Cole, Paul Kelly, Sarah Blasko, Ballpark Music, Sunnyboys, Violent Femmes, and more. Marshall found himself in front of JBL A Series supported by Chris Neale of Eclipse Lighting & Sound to mix Hoodoo Gurus with the Canberra Symphony Orchestra.

"We had about 80 lines off stage," reports Marshall. "Hoodoo Gurus were playing through smaller amps than they usually would, backed by the 38-piece orchestra. The show was about two hours long, with an interval. Peter Kubow was system tech, I mixed the Gurus and Chris Neale mixed the orchestra."

"We had 12 A12s per side, A8s as infill, and 15 subs in five stacks of three, run in cardioid. With just a single hang of 12s per side, it was very, very efficient PA. They expected 8,000 people to this free concert, and the final guesstimate was 15,000, almost double what they expected. It broke the record."







"I run an AVID S6L. After Peter had done his system tuning, I went to the graphic EQ I run across the left-right with my preferred little notches and flattened most of them out. I was a good 50 metres from the front of the stage, and we were metering 100dB-A, so it must have been 105dB-A down the front. It had tonnes of grunt, there was a lot more there if I needed it. I couldn't go crazy with an orchestra there, but I'd love to get the Gurus on their own on this system and crank it up! I just thoroughly enjoyed the whole system. It had really good imaging and was just so well defined."

Eclipse's Chris Neale concurs; "I had lots of gain before feedback with the orchestra. The

rear rejection was really good. It sounded nice as soon as we turned it on, and we didn't have to do a whole lot to it to get it sitting nicely."

"The rigging is sensational. This is definitely the next iteration of modern rigging design. A Series stores folded up in an arc. You put the pins in it while it's in the arc. Then, as you lift it, depending on where you put the pins, it clicks itself into those spots. On the way down, there's red levers on each box, and whichever boxes you pull the levers on, it allows those to fall down back into the arc. It's quite elegant and simple. A lot of boxes that I've used are often a lot fiddlier than that."



# LIGHTWARE

## USB-C CABLES

Lightware offers an extensive range of no compromise USB-C cables in passive lengths from 1 to 5 meters, with our mid length 4 and 5 meter models utilizing Lightware's unique MicroCoax technology. Our long distance 8 & 10 meter Active Optical USB-C cables incorporate the security of screw locking & a conduit friendly thin diameter for easy installation. Lightware certified cables have been vigorously tested to ensure they work seamlessly with your chosen sources, room peripherals & of course with our award winning Lightware UCX & Taurus TPX systems, there's nothing like a Lightware full featured USB-C cable.



### CAB-USBC-T200C

- 2m USB Type-C Copper Cable
- USB3.2 Gen2x2 20Gbps for 4K60
- 100W Charging and eMarker



### CAB-USBC-T300A, CAB-USBC-T400B & CAB-USBC-T500B

- 3-4-5m USB Type-C Copper Cables
- USB3.2 Gen1x2 10Gbps for 4K60
- 60W Charging and eMarker



### CAB-USBC-AOC800K & CAB-USBC-AOC1000K

- 8-10m USB Type-C Active Optical Cables
- USB3.2 Gen1x1 5Gbps for 4K30
- 60W Charging and eMarker

Lightware Australia ☎ +612 9188 0658 ✉ [sales.anz@lightware.com](mailto:sales.anz@lightware.com) 🌐 [lightware.com](http://lightware.com)



# Already in Inventory

## Proud VTX A Series Owners

### Rockstar Productions – Coomera, QLD

John Yost of Rockstar Productions boasts a stock of A6 and A8 line array elements, plus G28 and B18 subs. "We're using them every chance we get because they're so scalable," says John. "The amount of output that we get out of them means we need less boxes. Four months ago, at a James Reyne concert at Alexander Hills Hotel, we used two B18 subs a side and three line array elements a side for 1,000 people, which is which is unheard of. 10 years ago, if you said you could use four 18 inch subs for 1,000 people they'd say you had rocks in your head. We did 15,000 people for New Year's Eve at Broadwater Parklands with the A8s flown and A6s as front fill. We also used A6s on stands as delays, and that was pure magic."

"I can set up a ground stack by myself, which is incredible. With a four channel Crown amp, you can run 16 elements. All of the VTX A products are designed to work with each other and have the same voicing; they all play well with each other. I can't speak highly enough of A Series. I'm probably going to be selling off some of my other systems so I can buy more of it."





## Centrestate Sound & Lighting - Orange, NSW

Allan Brown's Centrestate runs 16 A8s and six B28 subs on Crown I-Tech 4x3500HD amps. "We're typically flying the whole system on the big festivals we do," explains Allan. "There's the Elvis Festival in Parkes, which is huge and just added another day. There's other themed festivals we supply too; there's ABBA, Dolly Parton, and David Bowie festivals. There's a big festival over in Forbes called Frost and Fire, right on the winter solstice. Dunedoo have a mini 'Day on the Green'; they call it 'Tunes on the Turf'.

"The A Series is a huge improvement on JBL's previous products. It takes up less truck, it's lighter, and more efficient. It goes up and down easy. In sound, it's smoother than older JBL; it hasn't got that bark at 2kHz that everybody used to talk about. That's definitely in the past."

"I can't fault MadisonAV as a supplier. When they found out they couldn't deliver the



subs I ordered for quite a while, they loaned me six G28s to keep until my order came in. How many companies do that? I've really

got to say thanks to them, they got me out of a tight spot when it really mattered."



VTX JBL A8 Line Array System

## Stage & Audio - Rockhampton, QLD

Stage & Audio own 24 A8s and 18 B18 subwoofers. "In addition to running production and hire as Stage & Audio, we put on our own events under the brand Capricorn Events," explains Head Technician Aaron Buchholz. "We put on our own festivals in Rockhampton, Bundaberg, and Emerald this year, with plans to expand that into other cities in coming years."

"We often split this system into three, with four tops and three subs aside, ground stacked. It goes out all the time. Over the Easter weekend, we split it in two, with half at Gladstone Harbour Festival and half at Rockynats here in Rockhampton. Because we wanted six subs a side at each show, we borrowed six more from MadisonAV, and just had to pay the freight, which was awesome. It's good to have that kind of support."

"We love how compact the A8s are, and how efficient it is with amp channels. We

run a Crown I-Tech 4x3500HD and an-Tech 12000HD in a 7RU rack with a patch panel on the front. That can run three tops per side, plus subs."

Richard 'Al' Weller-Boyes is a full-time sound technician at Stage & Audio, and is often in front of their A Series rig. "Most of our gigs are ground stacked, but three times a year or so we'll fly the whole rig for big events like The Village Festival at Yeppoon and Carols by Candlelight at the Music Bowl in Rockhampton," explains Al.

"I really enjoy the A8s, they're very clean. If you're in an outdoor venue, you really don't need to EQ them. There are no obvious frequencies missing, and they're very Hi-Fi sounding for a speaker capable of its outputs. The A8s are flawless, both in sound and durability. We've had no issues with any drivers needing replacement. Everything's been rock solid."



Village Festival Yeppoon Stage for Hoodoo Gurus





## GREEN-GO BridgeX extends Gameday Hire's remote production capability

**Broadcast and streaming rental specialist Gameday Hire has expanded its GREEN-GO setup by investing in a BridgeX quad network bridge interface, enhancing its remote production capabilities.**

The Sydney-based company, headed up by Australian broadcast industry veteran Andy Liell, has heavily invested in GREEN-GO products over the last year with support from Rod McKinnon at Event Communications Australia. Gameday Hire's team travels across Australia, New Zealand and the South Pacific, often delivering outside broadcast technology in remote locations that require rock solid communications. Incorporating the BridgeX into their existing, extensive GREEN-GO comms system means that the company can massively improve comms for their remote production solutions.

One such project Gameday Hire provides ongoing solutions for is an Australian sporting code. With three control rooms and multiple LiveU based field production kits around the country, the Gameday Hire facility covers up

to 8 x 3 camera matches per week, which are broadcast live on a major streaming platform. The facility was built around GREEN-GO comms using Dante interfaces for local commentary and 4 Wire interface carried over LiveU for the remote camera comms.

"When we worked on Season 1, we only required a single 4Wire feed to the remote site for the camera operators, handled by the LiveU," explains Andy. "With the move to having the commentators on-site, we now needed to provide the camera comms and at least two additional comms channels for the commentators. As this exceeded the LiveU capability, we tested the BridgeX as a natural extension to our existing GREEN-GO infrastructure. The BridgeX seamlessly connected to four remote GREEN-GO crosspoints using a 5G modem. I was really pleased to find that not only was the GREEN-GO implementation very reliable, but also that the audio quality was as good as if we were on the local network in the studio."

The BridgeX solution is essentially 'plug and play' once configured. Standard GREEN-GO devices are switched into an "Online" mode and establish a connection over public internet back to the BridgeX. Latency varies between 400-800ms from studio to remote, which

the team says is very manageable for this application.

BridgeX also enables the use of the GREEN-GO app, which turns Android/iOS devices into a mobile GREEN-GO user. While not being used in this application, Gameday Hire tested the app thoroughly for future applications and report that they found it to be very user-friendly, with the great audio quality they experience in all their GREEN-GO systems.

"We couldn't be happier with this solution," adds Liell. "It further justifies our investment in GREEN-GO comms for our business. I'd also like to mention that the support from their Australian distributor Event Communications is always first class. Thanks to the two Rods, Liam and the team."

The BridgeX is now working alongside Gameday Hire's multiple GREEN-GO MCX Multi-Channel Rack and MCX-D Multi-Channel Desk Stations, Dante interfaces and GREEN-GO Slim Audio Interface 4 Wire devices, as well as multiple GREEN-GO Wireless Beltpacks and Antennas.

# GREEN-GO DanteX Interface is key for intricate Tori Amos tour Comms

The US leg of Tori Amos's 2023 Ocean to Ocean tour kicked off in West Palm Beach, Florida in June with a fresh and eclectic setlist, ready to rouse fans across the States. The crew joining this US leg were armed with an array of GREEN-GO Digital intercom products as a clear, rock-solid system.

At the heart of the setup is a GREEN-GO DanteX Interface, which is directly converting digital audio streams from Dante to GREEN-GO and vice-versa without loss of quality.

"The GREEN-GO DanteX Interface was key to our system," says Alex Penn, Commercial Director at UK-based 22Live, which supplied a complete audio system for the Ocean to Ocean tour in both Europe and the US. "The tour was already using an extensive Dante network that covered many jobs including the PA returns, and shared stage racks for both the FOH and Monitor mixing consoles.

"Utilising the DanteX Interface enabled the comms to be seen by the desks, which in turn meant that the comms can be routed either to IEM packs on stage which are also used by the crew in prep, and also sent to the loudspeakers if so desired as a shout style system."

The crew were kitted out with six GREEN-GO Beltpack X units, allowing communication over 32 available channels, a program audio channel and an extra channel for direct user communication. Via this, the team could talk to multiple groups or directly - and privately - to other users. Two GREEN-GO Beacon call indicator units were located with Miles Barton, PA and FOH System Technician, and Andy Yates, Stage and Monitor technician, which lit

up when receiving comms from other key team members, allowing them to direct a reply to the designated group in the venue. All GREEN-GO products were supplied to the tour by 22Live, sourced from GREEN-GO's exclusive UK and Ireland distributor, Canford Audio Ltd.

"We like GREEN-GO because the kit is fast becoming standard and widely used, which makes it a known quantity to many, and also enables easy to sub hire additions if required," adds Penn. "They are good value for money, reliable and flexible."

System tech for the tour, Miles Barton, comments: "The addition of the GREEN-GO comms system to the 2023 Ocean to Ocean tour has been another upgrade which has allowed us to push the boundaries of what we're doing further forwards. Comms are a small part of the overall package, but it has made a big difference to us on the tour with us now sharing a system between sound, light and stage, enabling further improvement to our day-to-day service to the tour."

Tori Amos's Ocean to Ocean tour meandered through the entire United States during June and July 2023, visiting cities including Seattle, San Francisco, and St Louis.

Private talk

All PoE

Group-talk Flexible

Low latency

Your Comms  
Over Ethernet

**EVENT**  
COMMUNICATIONS  
AUSTRALIA

info@evcomaus.com.au  
evcomaus.com.au





# GREENGO MAKES STRIDES

Stride Antenna

Visitors to this year's Prolight+Sound exhibition in Frankfurt were among the first to see a major innovation from comms system manufacturer, Green-GO. Receiving its worldwide launch at the show in March was the Stride Antenna – the first product to be announced in the award-winning company's brand-new Stride wireless series.

As its name suggests, Stride is a big step forward for the comms market, bringing seamless roaming, greater DECT spectrum efficiency and increased user mobility, without affecting the range or the audio quality of devices on the network. Compatible with existing Green-GO WBPX wireless beltacks, Stride enables higher DECT device density, allowing more WBPX beltacks to be used simultaneously within the same area.

"True seamless roaming has been a goal for Green-GO's customers since the very beginning," says Silvio Cibien, CEO of Anima Network, the company responsible for Green-GO's export and marketing, explaining the importance of this innovation. "Now, with Stride, we can finally deliver it. Achieving this function is a huge success for us, requiring a significant investment for the licence to enable us to develop our own control of the DECT protocol."

Green-GO's Stride Antennas synchronise automatically. DECT time slots are synchronised across multiple Stride Antennas via PTPv2 (Precision Time Protocol version 2) technology, without additional action required from the user. This effectively enhances the consistency of coverage within a given area,

providing seamless roaming. Before the arrival of Stride, unavoidable 'handover gaps' between the areas covered by unsynchronised antennas were a fact of life with such systems. Now, with Stride Antennas, a Green-GO system can make full use of the available DECT spectrum, allowing a greater device density than was possible before.

The use of Stride Antennas will not compromise the range of a single antenna or cell on the network. This true seamless roaming between all antennas enables increased mobility, as each user can move around more freely within the coverage area, as well as into wider areas with the range extended by the addition of more antennas.

Green-GO has also made a significant investment in developing new tools to give intercom technicians the insights they will need in the utilisation of the DECT spectrum and RF coverage, enabling them to diagnose and understand possible issues early.

Device pools can include up to 250 Stride Antennas and 100 wireless beltacks, while each Stride Antenna can accommodate up to five simultaneous WBPX connections. A user interface on the antenna displays configuration

## Key features

- Compatible with WBPX wireless beltacks
- True seamless roaming, all beltacks in a pool can freely move between all antennas
- Up to 5 simultaneous WBPX connections to one antenna
- Pools with up to 100 wireless beltacks
- Pools with up to 250 Stride Antennas
- User interface with e-ink display for information and configuration
- RGB LED for device status
- Outdoor rated housing, IP53
- Various mounting options, 3/8", M10 and VESA
- DECT antenna analyser mode to see and analyse the DECT spectrum utilisation
- Power: USB-C (5VDC) or PoE (802af)  
Consumption: 10W
- Size: 140x140 x53 mm
- Weight: 360g

information and an RGB LED indicator shows device status, while extended RF monitoring information is available on both the wireless beltack and via Green-GO's Control software. A DECT antenna analyser mode allows users to keep track of DECT spectrum utilisation. Furthermore, the Stride Antenna has an IP53-rated housing for outdoor use, and includes various mounting options (3/8", M10, and VESA).

Green-GO will reveal new products and functionality for the Stride series in the near future.

# Sometimes it all gets too much...



The *Support Act Wellbeing Helpline* is a free, confidential counselling service that is available to anyone working in Australian music who needs to talk to someone about any aspect of their wellbeing.



THE SUPPORT ACT WELLBEING HELPLINE IS MADE POSSIBLE WITH THE SUPPORT OF:







# Riedel Enhances Interstellar Technologies' Space Launch

## Riedel Expands RiCapture Ingest Solutions Portfolio & Enhances Interstellar Technologies' Space Launch with Advanced Communication and Video Transmission Solutions

At the recent 2024 NAB Show, in Las Vegas, Riedel Communications announced a significant expansion of the company's RiCapture ingest solutions line with the addition of RiCapture i8, i44, and i84. Complementing the RiCapture i4, these new additions bring increased channel density and/or UHD resolution, 8- and 10-bit support, expanded internal SSD storage, and a series of advanced functionalities to the RiCapture platform.

With the brand-new SSE interface for scheduling, streaming, and exporting, the RiCapture product line now offers a powerful and compact solution for multichannel HD/ UHD ingest recording and integration to postproduction. The SSE control application allows for flexible configuration, letting users select between high-resolution DNxHD/R, H.264, or a combination of the two, and includes audio-mapping and down-mix audio-listening capabilities. RiCapture offers maximum versatility to capture the recorded media locally, on removable storage, on network-attached storage, or to live-streaming destinations. It can be expanded to a network of multiple servers for higher-density recording

and unlimited destinations with control from a single SSE interface.

The i4 and i8 provide four or eight HD HDR input channels, while the i44 and i84 boast four UHD channels with HDR capability. On the audio side, all RiCapture products are capable of 16 channels of embedded audio per channel, as well as 64 Dante or AES67 channels.

In all configurations, RiCapture offers high-quality recording in DNxHD or DNxHR along with H.264 4:2:0 and 4:2:2 encoding to the local storage. The local recording storage offers continuous loop recording for the captured content, with options to stream manually, stream with a scheduler, or clip and export files as needed from the available local storage to numerous streaming destinations.

There are three software add-ons available in the RiCapture product line: the VDR panel, a web-based UI with expanded multichannel control for clip playback, program delays, monitor wall playback and other scenarios; the RiView application, which is a multiviewer UI that includes audio down-mix monitoring for synchronised review of record feeds, clipping,

and export to multiple destinations; and the XDCAM add-on, which provides the tapeless XDCAM format for HD video acquisition and storage.

"As a complete suite for multichannel ingest recording capture and transfer to postproduction, RiCapture caters to a wide range of markets – from sports, concerts, and theatres, to motion picture applications," said Bernard Stas, Product Manager, Live Video Production, Riedel Communications. "Accommodating UHD resolutions and a variety of formats, such as 23.98 fps and 29.97 fps, the newly expanded RiCapture family sets the bar for high-quality ingest solutions at a competitive price."

Riedel Communications has also announced its collaboration with Interstellar Technologies, a pioneering space transportation company based in Hokkaido, Japan, to overcome communication and video transmission challenges in its operations. Riedel provided Interstellar with a clear, reliable communication system for its staff as well as an IP video system that significantly reduces delay and improves image quality for the facility's 4K cameras – allowing the ongoing development

# SEE IT. LOVE IT. REPLAY IT.

## RIMOTION REPLAY



### ▶▶ REPLAY FOR EVERYBODY, EVERYWHERE.

RiMotion is an easy-to-install replay solution that can be implemented almost instantly in broadcast environments of any scale. It streamlines traditional and modern workflows and provides real-time performance, even when working remotely.

- Intuitive touchscreen UI
- Dedicated Remote Controller
- Compact 1RU or 2RU server

**SUPER-SLOMO** **CAPABLE**

#### Available in five cost-effective bundles:

RiMotion R6, R8, R10, and R12 with 6 to 12 HD channels

RiMotion R84 with up to 4 UHD / 8 HD, HDR channels

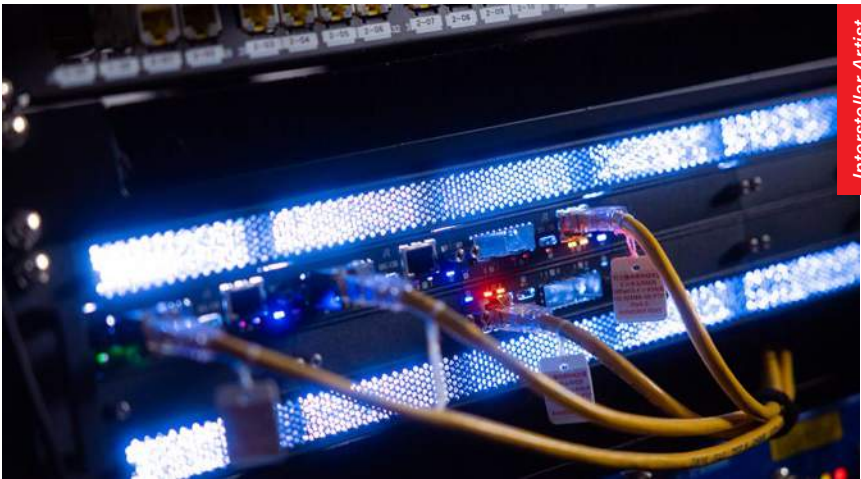




of Interstellar's next-generation small satellite launch vehicle ZERO to continue without a hitch.

"Riedel's solutions impressed us with their functionality and rationality, and we are certain that they will play a crucial role in Rocket ZERO's launch operations," said Kazunori Makino, TT&C Group Leader, R&D Department at Interstellar. "Our collaboration with an esteemed brand like Riedel underscores our dedication to upholding the highest quality standards in the technical domain. As we gear up for the inaugural launch of ZERO, we are committed to expanding the system. The Riedel solution will not only be utilised by Interstellar staff but also by affiliated satellite companies, ensuring a superior level of launch operations for our company."

Interstellar faced significant communication delays using traditional digital radios at its two main facilities – the command centre and the combustion test and launch site – both of which are crucial for monitoring and launching commercial rockets. Additionally, the need for a high-quality, low-latency video system was paramount with the upcoming launch of the first Rocket ZERO. Upon learning about Riedel's success in providing solutions for Formula One, Interstellar's R&D department reached out to Riedel's sales partner in Japan, Otaritec Corporation. Together with Riedel Communications Japan, Otaritec developed a tailored solution to meet Interstellar's needs.



Interstellar Artist



Interstellar Bolero



Interstellar SmartPanel



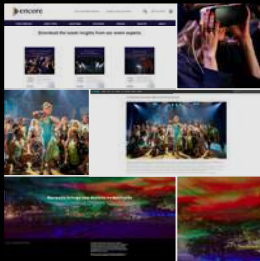
Interstellar Testing

The solution included the installation of an Artist-1024 digital matrix intercom, eight RSP-1216HL Hybrid Lever Key SmartPanels, and one Bolero antenna at the command centre, along with two Bolero antennas and six beltacks at the combustion test and launch sites. For video transmission, 12 MediorNet IP Fusion 6B devices using the JPEG XS video coding standard were installed, enabling lightly compressed, high-quality video with low latency between sites. The updated system has significantly improved communication and video transmission, ensuring smooth operations between the command post and the test site as staff members move about. The Bolero system has been particularly well-received by Interstellar staff for its ease of use and operability, enabling team members to monitor the development of commercial rockets via constant, accurate, and crystal-clear communication.

"Riedel and Otaritec are honored to contribute to this exceptional spaceflight program with our cutting-edge communication and video transmission technology," said Guillaume Mauffrey, Director of Sales, Asia, Riedel Communications. "Our solutions are designed to ensure seamless operations in mission-critical environments, and we are thrilled to see them play a role in the advancement of space exploration."

Further information about Riedel and the company's products go to: [www.riedel.net](http://www.riedel.net)

# Creative Services for the AV and Entertainment Technology Industries.



**Specialist  
Content  
Creation**



**Integrated  
Print & Digital  
Media**



**Marketing  
& Business  
Development**



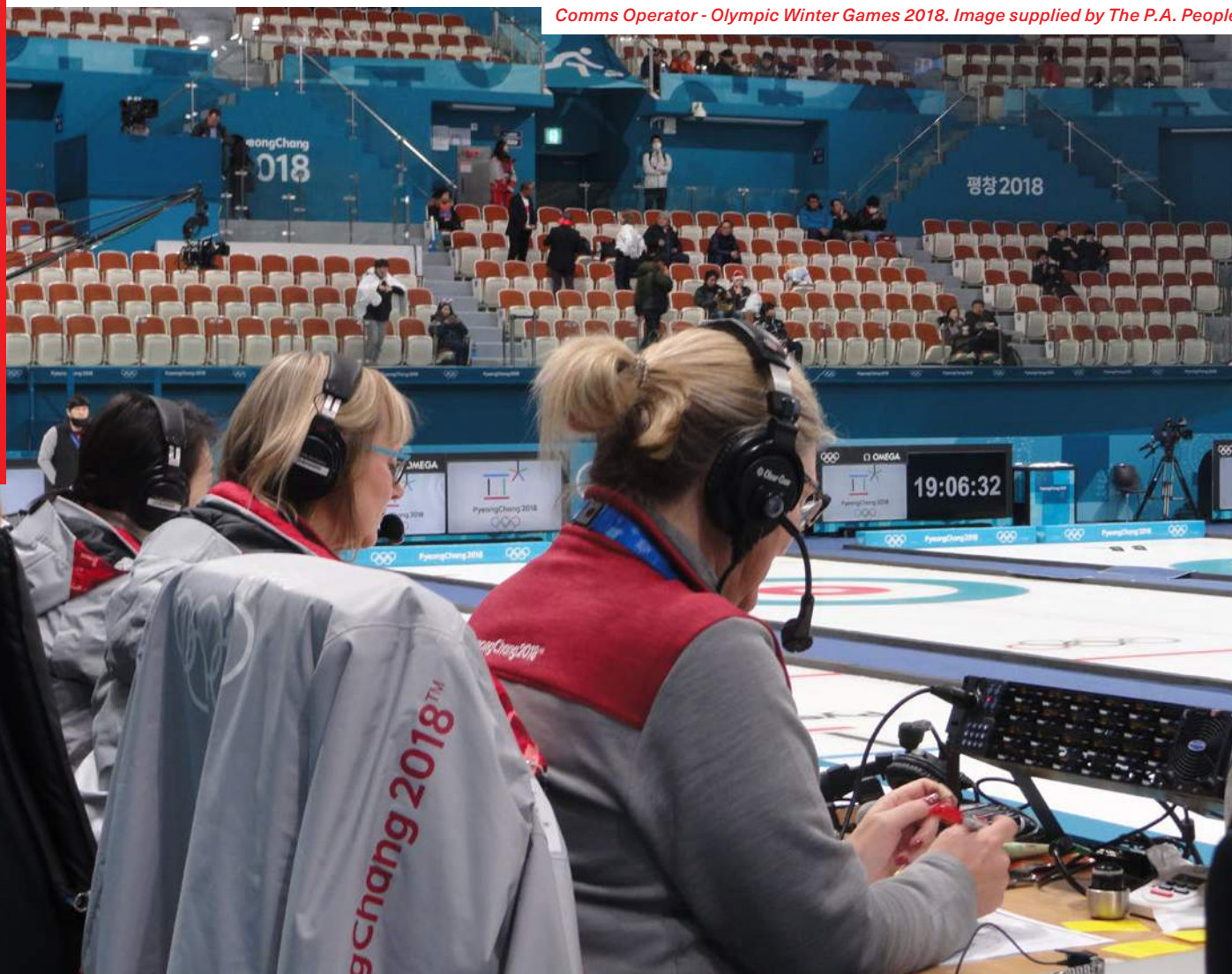
**Professional  
Event  
Services**

VCS Creative understands your products and services because we've used them professionally. We are AV, sound, lighting, video, comms, and staging professionals working as content creators and AV and entertainment technology business specialists. You don't have to explain your products to us; we know how to sell them to your potential customers.

[vcscreative.com](http://vcscreative.com)







# Network-Based Solutions

**Over the past 25 years, The P.A. People have developed a reputation as one of the world's leading event communications providers. Now located in its new facility in suburban Greenacre in middle Sydney, the company continues to expand its rental communications and audio hire fleet.**

Throughout that period, a key feature of The P.A. People's approach has been its focus on network-based solutions as the core of its rental fleet offering. That focus has proven time and again to be a significant enabler and differentiator in the company's Event Communications rental offering.

Back in the late 1990s, network audio was beginning to emerge. The P.A. People and its sister entity Creative Audio were early adopters of this technology, and installed a number of large CobraNet based systems in The Sydney Opera House, Stadium Australia, and the site-wide system covering the entire Sydney Olympic Park precinct.

As part of its involvement in the Ceremonies for the Athens Olympics in 2004, the event's production team identified a requirement to add an intercom communications panel on the other side of a busy freeway adjacent to the stadium. Back then there was no native IP connectivity and intercom panels were connected back to the frame as analog audio with RS422 data streams. The P.A. People had previously supplied the production with some novel Free Space Optical (FSO) 100m Ethernet links to provide a data connection between the Stadium and their offices, so a solution was devised using an additional FSO, CobraNet audio transport and a set of RS422 modems

all over Ethernet. Not very elegant by today's standards, but it worked.

By 2006, a new digital audio transport was coming to the fore, with the good folks at Australian start-up Audinate releasing Dante to the market in the late 2000s. More on this later.

Meanwhile, around 2010, Clear-Com continued to innovate with the release of a direct IP network connection between their HX Eclipse frame and their key stations. As an early adopter, this proved to be a watershed moment for intercom in general and for The P.A. People in particular. For the first time, the notion of being able to extend the reach of a production intercom system between sites was becoming a reality – no longer would we need to rely on PSTN telephone hybrids and ISDN connections to create multi-venue events.

Since then, The P.A. People would extend their focus on the use of networks as the backbone of the Event Communications offering.

The P.A. People has continued to extend the use of IP based intercom solutions for multi-venue events. One of the challenges in





Sydney NYE - City of Sydney. Photo Credit: Keith McInnes



Baku 2015 - Major events comms gear. Image supplied by The P.A. People

"One of the challenges in creating multi-venue solutions has been the short-term nature of the requirement, and the inherent complexity of creating the necessary routing between systems."



UAE National Day. Photo Credit: Nicolas Chavance Groupe

creating multi-venue solutions has been the short-term nature of the requirement, and the inherent complexity of creating the necessary routing between systems. Some of these interoperability issues were overcome by installing a large Clear-Com HX intercom frame in an Australian data centre.

In recent years Clear-Com released Agent IC (virtual end point for Apple and Android) and Station IC which extends the solution to the desktop. Coupled with the Clear-Com LQ product, The P.A. People are able to provide large scale multi-venue solutions with both hardware and virtual endpoints, albeit with the costs associated with having physical intercom main frames tied up in data centres.

"This solution has been very effective throughout the pandemic, and has proved invaluable in allowing personnel to work from home as part of a team, even to the extent where we had a client show calling a major

event on a physical key station from his house in Western Sydney," muses Nicky Dodds, Manager Event Communications at The P.A. People

"A key to our story with both audio and communications is our investment throughout the pandemic in upskilling our team with a comprehensive understanding of 'Networking for Entertainment', which has paid significant dividends. No longer do we reach for splitters, multicores or multipins, rather the tools of choice are network switches, fibre optic cables, wireless links, and Uninterruptible Power Supplies. The network is the backbone of the event, and attention to detail in design and management is essential," she continues.

Today, The P.A. People's audio systems are almost entirely centred on Dante. The company has embraced the world's best audio and networking technology manufacturers; Yamaha Rivage PM5 and DM7 mixing desks,

Shure radio mics, and Linea Research amplifiers and processors, which all provide direct connections to the Dante network.

"Soon we will be providing systems where the audio remains in the digital domain from the mic capsule through to the output of the amplifier. No need for mic splitters or additional cabling in large and complex systems. Our redundant Primary and Secondary networks will take care of signal routing between multiple consoles and systems."

Earlier this year Clear-Com released Gen-IC, a next generation cloud-based intercom solution that removes the need for frames in the data centre, and that promises to democratise multi-venue and virtual intercom systems and provide an off the shelf solution to link both virtual and physical intercom solutions into a complete integrated package.

"This is what we have been waiting for," Dodds concludes.



# Listen Technologies, Ampetronic, Auracast,



## *and the Future of Assisted Listening*

In March 2024, Listen Technologies, a manufacturer of assisted listening and communications products out of Utah, USA, announced it was switching distribution in Australia and New Zealand to Jands. They joined another assisted listening brand long distributed by Jands, Ampetronic, who are owned by the same parent company as Listen.

Coming along with the brands is Andrew Attard, who for the previous seven and a half years had been working for Ampetronic based out of Newark in the UK, who counted Jands among his customers. He's now Business Development Manager at Jands.

"I moved to Australia and started working for Jands in October 2023," says Andrew. "I had come out to see Jands every year for the past five years in my role as business development engineer. I was always fascinated by Australia

and the opportunity to become part of the Jands family arose and here I am. I owe a lot to Ampetronic for the opportunities and lessons they have taught me. This would not have been possible without their support."

### Listen Here

Jands now offer the entire Listen Technologies portfolio including the new ListenWIFI (replacing ListenEVERYWHERE), ListenTALK, ListenRF, and ListenIR.

**ListenWIFI is a Wi-Fi streaming solution that allows people to use their smartphones or venue-provided receivers to access audio for assistive or personal listening.**

**ListenWIFI** features new hardware, including LWR-1050 Receivers, new LA-490 Beacons, new 2-, 4-, 8-, and 16-channel servers, and enhanced software that simplifies system configuration and management.

**ListenTALK** is a portable one or two-way communication system that's perfect for multiple applications and venues, including assistive listening, guided tours, training, group communication, language interpretation, and more.

**ListenRF** transmits sound over radio frequency directly to the listener's ear without amplifying ambient noise for crystal clear audio and unsurpassed intelligibility.

**ListenIR** performs like no other infrared product on the market, experience clear, focused audio with no dropouts or dead zones.



Listen Technologies Wi-Fi and Hardware

entech

# Exhibit at ENTECH in October 2024!

National or state by state

New entry level 2 x 2.4 stand, one city only.  
load in 8am, do the biz all day, out by 7pm

[Entech-roadshow.com](http://Entech-roadshow.com)

[Exhibit@entech-roadshow.com](mailto:Exhibit@entech-roadshow.com)

## OCTOBER 2024

### BRISBANE

Showground  
Tuesday 8 Oct

### SYDNEY

Hordern Sydney  
Thursday 10 Oct

### MELBOURNE

Showground  
Tuesday 15 Oct

### ADELAIDE

Showground  
Thursday 17 Oct

### PERTH

Showground  
Tuesday 22 Oct

For more information, please call +61 408 498180 or email [exhibit@entech-roadshow.com](mailto:exhibit@entech-roadshow.com)



When we spoke, Andrew had recently returned from Listen Technologies' HQ in Bluffdale, Utah and had seen the soon-to-be shipped ListenWIFI. "It's the same hardware as the previous ListenEVERYWHERE product, but the software is different," divulges Andrew. "They've added a new dedicated Wi-Fi receiver product; it's no longer relying on smartphones with dedicated software which can be less cost effective and can be quite heavy if worn with a neck loop. You can also buy a 16 channel docking station, which also allows for programming all 16 receivers. They're also releasing an IR and Bluetooth beacon. For example, in a museum you have a beacon everywhere there is an exhibit. There is a proximity switch set to low, medium, or high. Every time this beacon detects either your dedicated receiver or a smartphone, via IR or Bluetooth, it will tell your device what channel to tune into. You can have a seamless experience as you walk across spaces without having to manually change a channel."

The current Listen Everywhere products can be upgraded to ListenWIFI when it becomes available, but it involves some work. Customers interested in this can contact Jands for further information.

### Auracast and The Future

The big buzz at both Ampetronic and Listen Technologies (not to mention wearables and hearing aid manufacturers) is Auracast. It's a new broadcast audio capability over LE (low energy) Bluetooth, with an unlimited number of receivers able to tune in. It's been enabled to run on devices running on version 5.2 of the Bluetooth Core Specification as well as the

Public Broadcast Profile within the set of LE Audio specifications

"When I joined Ampetronic in 2016, that was when the talk started about what comes next in the hearing augmentation world," recalls Andrew. "As the market leader, the British government had assisted Ampetronic with some funding to develop assisted listening technologies for the future. At the moment, induction loops are still the best means of transmitting audio to the hard-of-hearing. Once installed, the user walks into a space, flicks their hearing aid onto the telecoil position, and they've got audio, as long as the system has been installed and commissioned correctly."

"But," warns Andrew, "the installation side can be complex; copper tape can get cut, and loops can get damaged. Over the years people have shifted towards other technologies. But these other technologies require a receiver. For the hard-of-hearing community, if you're trying to be inclusive, then handing out a receiver compared to having something that's already installed and working for the end users is a disservice. If I'm at a university, having to wear something around my neck may single me out as hard-of-hearing, which people may not like."

So how do we remove the complexity of installation, but provide the same ease-of-use of having a direct stream from a system that's publicly installed? "Auracast is using the Bluetooth Low Energy Protocol as a broadcast stream," answers Andrew. "This can be received by an unlimited number of receivers. Receivers are next-gen hearing aids and wearables. There's already a couple of products in each sector on the market. This

means anyone who has a wearable, not just the heard-of-hearing community, can access public audio. I could be in a classroom, and if there is an Auracast system installed and I have my wearable, I can tune into that lecture in a matter of seconds."

Auracast will soon be available in the market, but it will take years for this to become the norm for hearing aid users. "There have to be more products on the market," advises Andrew. "There have to be audiologists who are trained to specify these products, and people must then adopt the hearing aids. The lifecycle of a hearing aid is about four years. In the interim, we will be providing Auracast receivers, which have a neck loop like the current infrared or RF systems; they will generate a small magnetic field to connect to the hearing aid. In terms of future-proofing, if somebody is looking at an Auracast system now, they will need to provide receivers. If I was hard-of-hearing myself, I would make sure I got an Auracast compatible hearing aid, because if I'm in a space where that service is available, I can connect to that stream straightaway."

A recent event at Sydney's Cockle Bay Yacht Club demonstrated Auracast to a Bluetooth Special Interest Group (SIG) and Andrew was there to get all the details. "There is already an app for Auracast natively installed on some Android phones; the new Samsung S23s and S24s have it," he reports. "Once you have your wearable (e.g. earbuds) paired up to your phone, you just open your app, hit the scan button, and your phone scans all of the Auracast streams available in your area, and publishes them on your screen. All the user





has to do is click on the stream they want to hear. For example, if we're at an airport, there's 'Gate 41' or at Uni there's 'Classroom Three'. The audio is not going through your phone; the phone is only used for control, and that's why Auracast latency is low. It was proven at ISE earlier this year that latency is around 30 milliseconds from the source to the wearable. This means there is no perceivable latency. The Australian standard stipulates a maximum of 40 milliseconds from source to your receiver."

Market leaders in hearing aids such as GN ReSound and Cochlear already have Auracast technology available. Other consumer brands also have several wearables and portable speakers available.

I ask Andrew about the elephant in the room, and he chuckles; "No one knows what Apple are doing," he smiles. "They keep their cards pretty close to their chest. However, they are a smart company with smart people and my guess is that they will be onboard with something like Auracast as they would understand the importance of this technology."

## Introducing Auri

Ampetronic and Listen Technologies have teamed up to introduce a joint-first Auracast product, Auri. Unveiled at ISE 2024, it is the first Auracast broadcast audio-based solution for assistive listening to market.

It features high quality audio multi-channel broadcast to support open or secure audio transmission, as well as multi-language support, and can be used with

dedicated receivers or Auracast compatible devices such as wearables or hearing aids.

"Auri should be shipping later this year," relates Andrew. "Adoption of products or standards in the assisted listening market can take anywhere from four to 10 years. Customers that want to future-proof their systems now can install Auracast and provided receivers. As time goes on and there's more devices out there, people will connect directly, but in the meantime, we will provide receivers to make it compliant. The Australian standard does not yet address Auracast; It's not yet in the NCC (National Construction Code) or the 1428.5 Australian Standard. The existing standard for an FM system (and, technically Bluetooth LE is a type of radio), says all you have to do is provide receivers and meet latency obligations."

Auri offers efficiencies not possible in other assisted listening technologies. "In terms of range, it's well over 100 metres; it's almost too powerful," Andrew explains. "Auri can also be used in repeater mode. In a stadium, you may only need two or three to cover the whole stadium bowl, and there's no limit on receivers. So, once you have the Auracast wearable, either headphone, or hearing aid, you can just tune into it."

With such a seismic shift in the market coming, how are Listen Technologies and Ampetronic viewing their product roadmap? "Every product line that Listen Technologies and Ampetronic make has its own place in the market," Andrew comments. "Over the coming years, as Auracast becomes accepted as a technology and devices become widely adopted in public spaces and by consumers themselves, there

may start to be a shift in preference but this will take time."

Not all of the previous generation will be swept away by the Auracast tide. "I think IR will still be popular for security reasons," posits Andrew. "Courts are a very secure environment. If you use Auracast and hand out receivers, you can issue an encryption key. What we don't want is a person who has left the session to be able hear the next session. With Infrared, its security is hard to beat. As long as the light never leaves the space, it is still the most secure system you can provide."

## Lateral Thinking

There's a long tradition of out-of-the-box uses for devices originally intended for assisted (or private) listening. Think silent discos, art installations, and experimental theatre. I asked Andrew if he envisaged any creative applications for Auracast? "I can see Auracast being used in a live production environment," postulates Andrew. "For example, at a concert, we could provide eight separate mixes to the Auracast system. An audience member can choose to listen to the drummer's mix, or the guitar player's mix. Producers could monetise that service. I used to be a sound engineer, I'm also a guitar player, and I would find it interesting to hear what any particular musician is hearing. Because there is no installation involved, I don't see a reason why any production house, with any console, wouldn't have an Auracast access point living in the back of the mixer. It'll be so easy to just plug it in, feed it inputs, and now you're broadcasting to your audience."





# ANITA'S THEATRE

## Beloved Wollongong Institution Gets the Live Nation Treatment

**Built as a cinema in 1925 and called 'King's Theatre' at the time, Wollongong's Anita's Theatre has seen a lot change in the last hundred years. It closed in the mid-60s and reopened in the late 60s as a roller rink, which existed until the mid-90s. Illawarra businessman John Comelli bought the building in 2003, carrying out extensive renovations and re-opening four years later, named after his late wife.**

In October 2022, Live Nation Australia Venues took over the lease and operations. "Keeping venues such as Anita's Theatre open is imperative to the ongoing growth of local Australian artists," stated Roger Field, president of Live Nation Asia Pacific. Since then, Anita's has hosted increasingly high-profile touring concerts, stand-up comedy, and more.

Wollongong's Pro Sound and Lighting have been taking care of Anita's production needs for just over three years. "When Live Nation took ownership, we wanted to lift the spec up to be more rider friendly and of a higher standard," says Troy Michlmayr, Technical Manager at Pro Sound and Lighting. "Live Nation said in turn that they wanted to continue the relationship with us as a supplier. We understood that Live Nation wanted a better PA product in the venue to meet international artist's requirements."

Like most locals, Troy has a lot of love and nostalgia when it comes to Anita's. "I used to mix bands there back in the late 80s and early

90s when it was a roller rink," recalls Troy. "It was renovated from a two storey to a single storey venue, with reconstructed art deco paintwork. It's a really nice-looking theatre, with a capacity of 1200 in general admission, and 850 seated."

Pro Sound and Lighting decided to replace the existing PA with an all-new rig from d&b audiotechnik. "We wanted a tier one product that's on most riders," explains Troy. "We're doing everything from comedy right through to touring rock and roll, so we needed a system that could cater for that range, with high levels of speech intelligibility."

In a century-old building whose architects couldn't have envisaged modern PA and lighting rigs, weight and efficiency are a factor. "A small footprint and the overall performance were considerations. We've gone for a much smaller footprint than the previous rig, which has increased sightlines. We also have cardioid subs so we don't affect the residents nearby, which has also given us the added bonus of better on-stage sound."

The PA comprises four V Series line array elements per side; two V8s and two V12s, augmented by one V-GSUB per side. There are d&b audiotechnik E12s as balcony delays, E8s for front fill. On stage, there are 10 d&b audiotechnik M4 monitor wedges, fed from eight sends. Each FoH V element is amplified and processed by one channel of a d&b audiotechnik D40 amplifier. A d&b audiotechnik D80 amplifier drives the subs. Another D40 drives the delays and front fills.

Pre-install design work was done in EASE and d&b's ArrayCalc software. "We could look at how the coverage was going to be before we even went in, set angles, and tuned the room," explains Troy. "As our old system was three times the weight of the d&b, on the day it was so much easier to fly the new system. Doug Pringle from d&b audiotechnik distributor NAS came for tuning, but it more like tweaking due to the ArrayCalc modelling. After that, we found we had incredible amounts of SPL before any sort of limiting."



# SCAN AND SUBSCRIBE

Love to get your news online?  
Or just can't pass up a real-life,  
glossy, printed magazine?

Whatever your preference, we have the  
perfect subscription offer for you.

Simply scan the QR code here or visit  
[cxnetwork.com.au/cx-magazine-subscribe/](http://cxnetwork.com.au/cx-magazine-subscribe/)  
and subscribe to the industry's most relevant  
and in-depth magazine - delivered straight to  
your door or inbox!



## DIGITAL ACCESS ONLY

- / Weekly CX News  
email on  
Wednesday
- / Subscribe to digital  
web reader
- / Read on our site
- / Download in  
PDF format

**FREE**

## 1 YEAR PRINT + DIGITAL

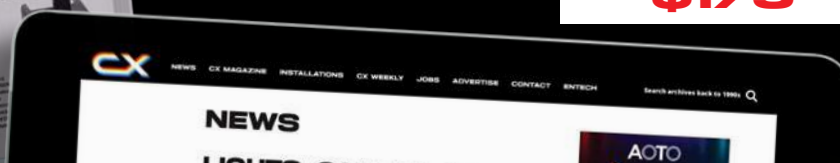
- / Weekly CX News  
email on  
Wednesday
- / Subscribe to digital  
web reader
- / Read on our site
- / Download in  
PDF format
- / 11 print issues  
per year - That's  
a saving of \$31

**\$79**

## 3 YEAR PRINT + DIGITAL

- / Weekly CX News  
email on  
Wednesday
- / Subscribe to digital  
web reader
- / Read on our site
- / Download in  
PDF format
- / 11 print issues per  
year - That's 33  
issues over 3 years  
and a saving of \$155

**\$175**





Not to be left out, Pro Sound and Lighting also upgraded the lighting rig. "We did a number of upgrades to the system, including an entire rig of Chauvet Professional fixtures," added Troy. "Control is now through a grandMA3 processing unit XL."

A lot of engineers have been in front of the PA since the upgrade. "I mix smaller shows at Anita's from time to time," Troy expands. "We've also got some very experienced industry people that have been around the traps that do in-house techs. And we're training up some young techs as well. They all say the intelligibility has increased. The overall SPL before distortion is incredible. I've found that the harder the system drives, the better it sounds. It's a system that actually likes to be driven a bit hard, especially for the rock shows. The change is just night and day. You can walk the entire room with very even coverage throughout the whole space. It makes us a world class venue with a world class audio spec. It's attracting bigger and better acts."

"It's a no brainer that the upgrade had to happen," concludes Troy, "and we're just so glad that we went with d&b. No one's ever mentioned supplementing a system or bringing extra PA in; everyone's been more than impressed with the output of the system."

Pro Sound and Lighting and Anita's aren't resting on their laurels; "We keep evolving and we keep adding to the system to keep the standard high," adds Troy. "We've just invested in Allen & Heath D-Live consoles, and we're running DiGiCo as well. It's a matter of keeping the quality up to match the speaker system and there's a roadmap for ongoing investment in the venue."

[www.anitastheatre.com.au](http://www.anitastheatre.com.au)  
[prosoundlighting.com.au](http://prosoundlighting.com.au)  
[www.dbaudio.com](http://www.dbaudio.com)  
[nas.solutions](http://nas.solutions)



"In a century-old building whose architects couldn't have envisaged modern PA and lighting rigs, weight and efficiency are a factor."

Pro Sound and Lighting's Claude Spinelli with NAS's Aaron Lee





Encore Event Technologies designed a professional sound system of an L2/L2D pair with a companion pair of L-Acoustics KS28 subwoofers in the Crown Palladium Ballroom

# Crown Palladium Installs First L-Acoustics L Series System in Southern Hemisphere

If an events centre's prestige is measured by the events it hosts, then the Crown Palladium rides high in the upper echelon of Australian venues. Situated in the Crown Melbourne resort, casino, and entertainment complex, the Palladium is a 1500-seat capacity ballroom well known to the public thanks to televised awards ceremonies for the Australian Football League (AFL) and Cricket Australia.

Encore Event Technologies is Crown Palladium's in-house AV provider. It's a busy gig. With thousands of events staged a year, there's never a dull moment for the Encore AV team.

L-Acoustics only publicly announced the L Series to the market in mid-2023, and the Crown Palladium loudspeakers were some of the first off the production line. The brand-new PA went from 'thought bubble' to 'perfect fit' in only a few days. Encore Event Technologies' Director of Innovation & Technology, Procurement (APAC), Daniel Lourenco, explains: "Upgrading the Palladium PA was a big decision and a large investment, so our selection required careful analysis of each brand and model and its capabilities. We went through a thorough process of assessment of our current inventory and needs within the Palladium. A large number of brands and models were carefully considered. We wanted the new PA to be a statement piece; to the industry, our team, and our clients."

Daniel Lourenco and his team auditioned several PA alternatives. Toward the end of the tender process, he had three quotes on his desk for three high-quality loudspeaker systems, including an L-Acoustics Kara II system. At this point, the L Series product announcement hit the market, and Daniel

was intrigued. "I immediately contacted Jands, L-Acoustics' Australian distributor, to ask them about it: 'Let's model the L Series in Soundvision to see how it might perform in the Crown Palladium'. Not long after, I got the answer: 'It's the perfect fit for Crown Palladium Ballroom'."

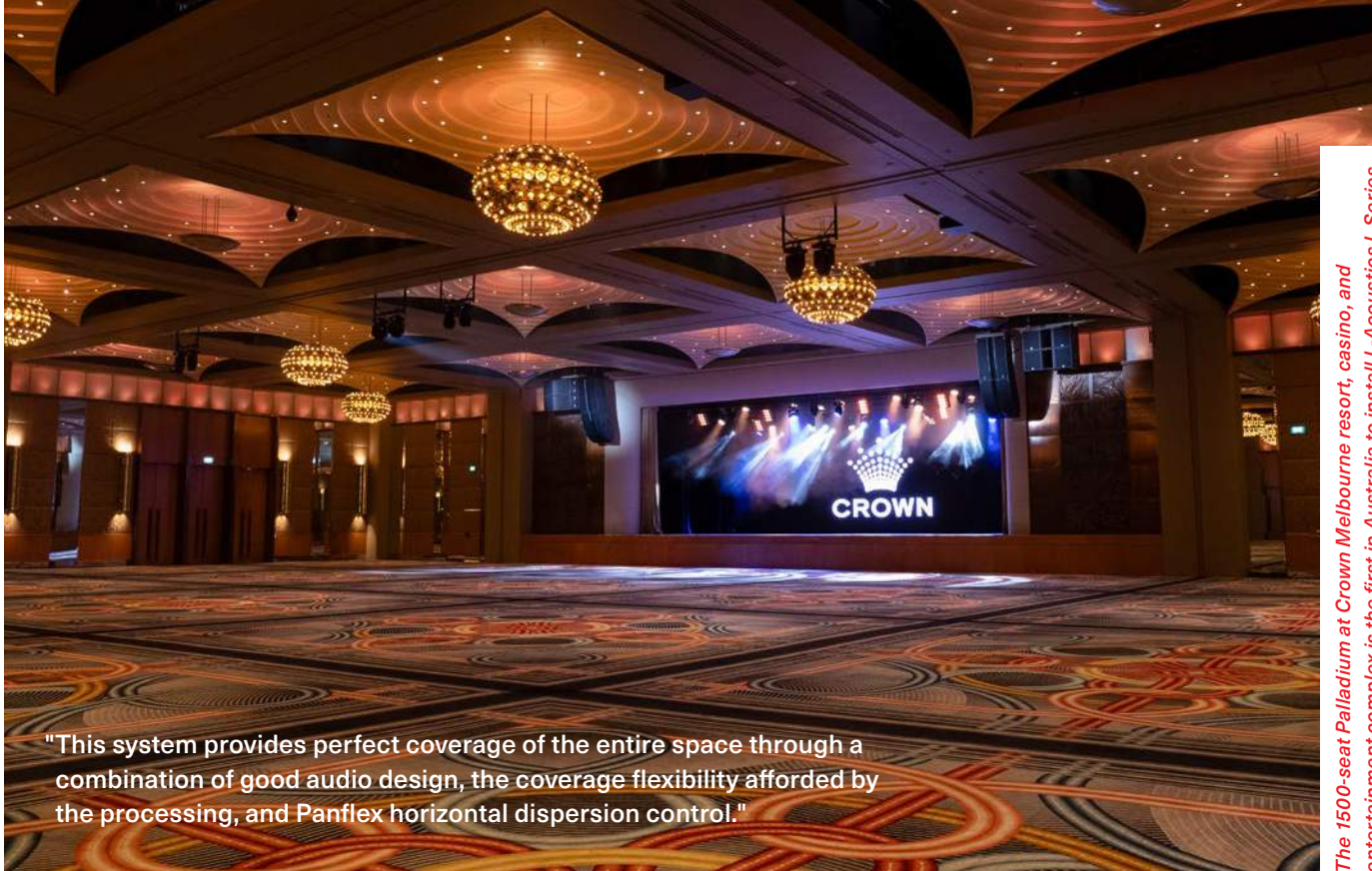
L-Acoustics introduced L Series after observing that most audience geometries, and therefore array designs, follow a similar trend, which led to the understanding, as Germain Simon, Director of Product Management, Loudspeakers at L-Acoustics, puts it: "that a fixed element with pre-defined progressive angles would provide incredible gains in quality, efficiency, and sustainability."

As such, L Series comprises two elements designed to work together or independently: L2 above and L2D below. One L2 or L2D element provides the same contour as four K2 elements in a format that is 46% smaller and 40% lighter. The audio benefits of L Series encompass industry-leading SPL per size, unparalleled consistency over the audience area, and improved rejection everywhere else. Accompanying the audio benefits, L Series revolutionises deployment with a smaller, lighter footprint that reduces truck space and requires fewer elements, cutting the number of actions needed to load in and out.

Crown Palladium has three main use cases or modes: full room, in-the-round, and split-room mode. Encore's design comprises an L2/L2D pair permanently installed on either side of the proscenium, with a companion pair of L-Acoustics KS28 subwoofers. This system provides perfect coverage of the entire space through a combination of good audio design, the coverage flexibility afforded by the processing, and Panflex horizontal dispersion control. This almost entirely negates the need for additional fill; it's almost as if L-Acoustics had the Palladium in mind when designing the L Series. Four additional, freely deployable L2D elements and four further KS28 subwoofers ensure the other two modes (in-the-round and split) are addressed rapidly and efficiently. The new LA7.16 high-resolution amplified controller drives the system, which supports L2 and L2D with 16 high-power amplification and processing channels. LA12X amplifiers power the KS28 subs.

Thanks to meticulous preparation, the installation of the FOH system went without a hitch. It also demonstrated to Daniel and his team just how easy L Series is to deploy as compared to a standard multi-element line array system: "The hours of labour you save when you're on the installation and the de-rig is phenomenal".





The 1500-seat Palladium at Crown Melbourne resort, casino, and entertainment complex is the first in Australia to install L-Acoustics L Series

"This system provides perfect coverage of the entire space through a combination of good audio design, the coverage flexibility afforded by the processing, and Panflex horizontal dispersion control."



L-Acoustics CEO Laurent Vaissie with Encore Event Technologies Director of Innovation & Technology, Procurement (APAC), Daniel Lourenco, at the L Series launch, Infocomm 2023

Crown Melbourne executives were consulted right the way through the procurement process, including a trip to the InfoComm show in the US to hear the L Series in action. Buy-in from Crown was important, and the payoff has been obvious to all. Crown Melbourne's Executive General Manager of Food & Beverage, Enda Cunningham, explains: "The Palladium is Crown Melbourne's premier space, and our clients have the highest expectations of the Palladium experience – the service, the food and beverage, and, of course, the audiovisual offering.

"The new L-Acoustics L Series loudspeaker system is a big leap forward for Crown Palladium. The consistency of the sound and the coverage is exceptional – every seat in the house gets the same crystal-clear sound."

The first hit out for the L Series system was a speaking tour date with ex-NFL great, Tom Brady. With 2200 seated, there was nothing but praise for the sound.

The impact the L Series system has had on the Encore Event Technologies business is profound. For starters, Encore's Daniel Lourenco can't foresee a situation where a visiting or touring act would want to bring in their own PA, which has obvious financial benefits for Encore and Crown. More than that, the L Series system provides the 'statement' Daniel was so keen to make: "We've elevated our brand with the investment in this system, no question. Our biggest asset is our people – our team — and this PA has given our people even more reason to be proud to wear the Encore logo on their shirts. The best people working with the best gear get the best results and the happiest clients. That's a recipe for success, and this L Series PA plays an important role in that virtuous circle."



# ADVERTISE WITH US



#### CX Magazine

**2,400** printed copies reach **6,000+ readers** every month.



#### CX News

Emailed to our database of **18,000+ recipients** every Wednesday.



#### CXnetwork.com.au

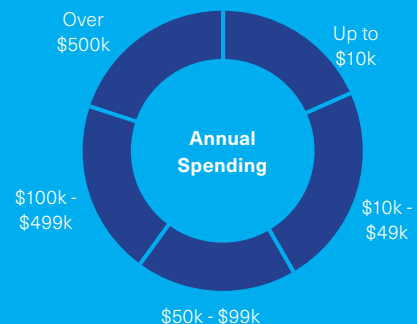
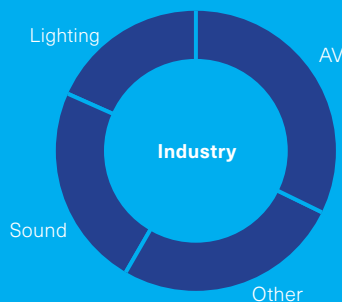
The website makes over **40,000 impressions** per month.



#### Social Media

Our social media generates **50,000+ impressions** monthly.

Your advertisement will have the best chance at succeeding with CX readers. Our audience are evenly spread across all areas of the industry and have varied annual spending habits.



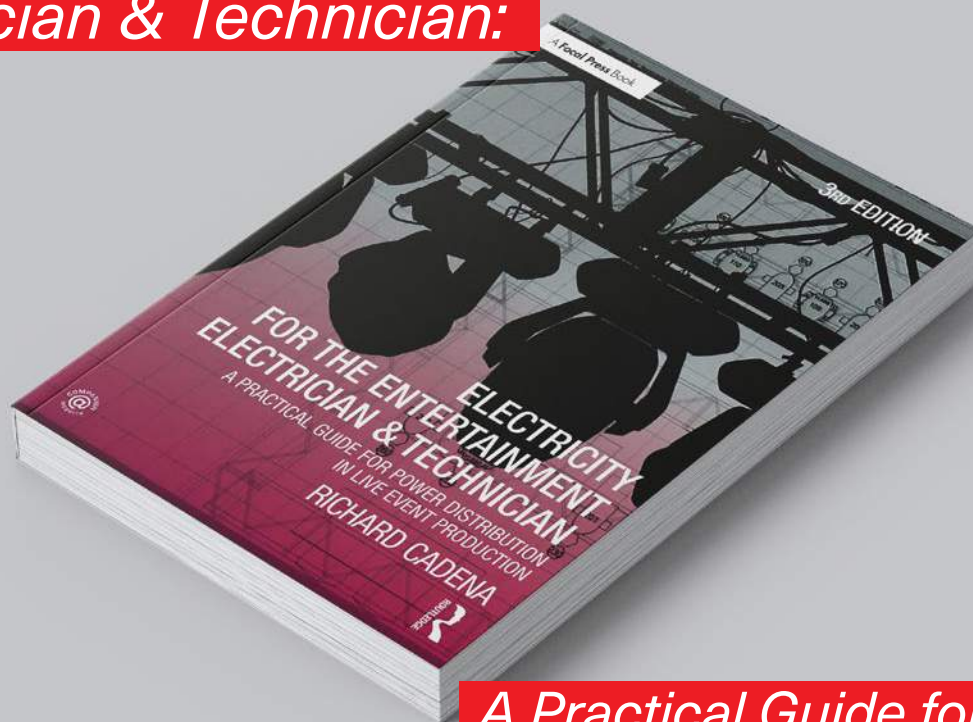
**Our audience are YOUR potential customers.**

Talk to us today about a custom package to promote your business.  
Any budget, any platform - print, web, email and social.

Email [jason@vcscreative.com](mailto:jason@vcscreative.com) or call 0407 735 920 for more information.



# Electricity for the Entertainment Electrician & Technician:



## A Practical Guide for Power Distribution in Live Event Production

### About the book

Electricity for the Entertainment Electrician & Technician, written by Richard Cadena, covers every aspect of power distribution from the fundamentals, like basic circuits, to three-phase power, power calculations, grounding and bonding, electrical safety, portable power generators, and battery power.

The book explores the principles of how electricity works, and its numerous applications in the entertainment industry. First and foremost, this book is a textbook. It's extremely dense and absorbing its 384 pages cover to cover is quite a tall order; definitely not a book you can nonchalantly read in a few sittings! Indeed, it took me a good three weeks to plough through it, reading no more than a handful of pages at a sitting, which also included taking the end-chapter quizzes to break the monotony! This is very much the kind of book you would use as a reference rather than opening it up for entertainment value or to get quick answers to simple questions.

Electricity for the Entertainment Electrician & Technician: A Practical Guide for Power Distribution in Live Event Production covers topics that are listed in the content outline for the ETCP Entertainment Electrician Certification exam, as well as the ETCP Portable Power Distribution Technician Certification exam. This reference supports practicing technicians and provides new technicians with the assistance they need for a successful career in the entertainment industry, and this is clearly the book's focus.

The book has so much information, in fact,

that it's quite an intimidating read – not for the faint-hearted, or for anyone looking for easily digestible answers to their technical questions. My overall concern with the book is that its dry, information-dense language has the potential to turn people off, or at least prevent them from absorbing its contents.

### Who is the book for?

This book is for anyone in our industry who wants a full-blown, in-depth education on electricity and electrical theory, and how the science behind it ties in with what we do for a living. In my opinion, this book goes well and truly beyond what an industry professional is required to know about electricity and electrical systems. That said, this book would be useful for anyone who is liable for, or in charge of, specifying electrical and power systems for live events and installs.

### Who might benefit from reading this book?

Anybody tasked with setting up anything that draws substantial amounts of power, be they a lighting systems tech looking after dimmer racks at a concert, a leading hand for an expo, or someone involved in deploying generators at a festival or similar.

### Who is this book not for?

Everybody who works in our industry should have a basic respect for electricity and a bit of knowledge on electrical theory and safe working practices. This, however, is not the book to give you that overview. So, for example, people who hang and operate lights, speakers

and LED walls will likely gain very little benefit, if anything at all, from this book.

### What I liked about the book

I like the way the book is laid out and the author's use of analogies to explain concepts. There were also some good supporting diagrams and pictures that explained these concepts well. You can tell the book is written by a teacher. Richard Cadena crams in a lot of information, and drills down deeply into every topic he explores. The appendixes at the back of the book are handy too. Having a defined reference area for formulas and calculations will no doubt save readers the tedium of having to flip back and forth through the tome's pages to find specific information.

### How I think the book could have been better

For better or worse, I feel like Richard Cadena may have overshot the mark a little when it comes to relevant knowledge. As I've already overstated by now, the book is a little bit too big, a little too dense and a little too dry. It feels more like the textbook an electrician would read than a practical guide for an industry person who's wanting to get better educated in electrical theory. A condensed and simplified version may have been more applicable to what we do in our industry, although in the author's defence, he does note that the book came about to specifically supplement a course that he was teaching at the time. (ETCP Entertainment Electrician Certification exam) – a fact worth noting.

## Readability: 4/10

This a textbook on a very dry subject, packed with information about electrical theory and safety. There's not much at all in the way of creative, fun stuff here. To that end, I will admit I had a lot of trouble staying focussed on the book. Whether that was due to the content and subject matter being inherently dry, the fashion in which it was presented or my overall attention span, is perhaps up for debate.

## Supporting materials: 7/10

The supporting materials were what really got me through this expansive book. As a visual person it helped that many of the concepts were explained schematically and in pictures as well as in writing. I wouldn't have gleaned or retained nearly as much from this book had it not been for these supporting materials.

## Relevance: 6/10

Relevance is a tricky one to ascertain here. The book well and truly overshoots the mark in providing digestible information for what someone working in our industry would require. It feels more like a like a book for a qualified electrician who's undertaking a bit of work in live entertainment, rather than a practical guide for a leading tech who's been tasked with mapping out power runs for an expo, or a production manager trying to work out what size generator they need to run a pop-up stage.

## Usefulness: 7/10

In this case, relevance and usefulness go hand in hand. If you were to find the book relevant – and that's entirely dependent on the reader – it would be something you'd keep on a shelf to refer back to as needed. This is not the kind of book you'd read once and then give away. For those who found it directly relevant to their circumstances, Electricity for the Entertainment Electrician & Technician would be gold.

## Value for money: 8/10

If it's information you require, you certainly get a lot for your money here. Richard Cadena provides a tonne of information in this voluminous work. The real issue is whether or not this information is ultimately digestible. The book is certainly a good buy for the price and for the fact that you would hang onto it as reference.

**Total: 32/50 = 4 Stars**



## About the Author

Richard Cadena is a freelance lighting designer, lighting consultant, and the author of Automated Lighting: The Art and Science of Moving Light, Lighting Design for Modern Houses of Worship, and Focus on Lighting Technology. He has worked on concert tours, television, and theatre, and has designed dozens of lighting systems for permanent installations. He is the technical editor for PLASA Media and a columnist for Lighting & Sound America, Lighting & Sound International, and Protocol, as well as a member in good standing of IATSE Local 205.



# WHY AM I STILL DOING THIS?

## Chris Kennedy's hard landing

Chris rose to international prominence when he won the tender to supply live sound for the 2000 Sydney Olympics. His company, Norwest Productions went on to become one of the largest technical production houses in the region, with more than 200 staff. Then the pandemic hit, leading him back to the future.



Chris Kennedy with wife Sarah Kennedy

We met for lunch recently at The Rabbit Bar in the Arthouse Hotel, in downtown Sydney on a hot Summer's day. I turned on the recorder...

Julius Grafton: What was NW Group's position at the start of COVID, Chris?

**Chris Kennedy:** *Perilous. A lot of employees and expensive offices. We had enough to pay people for six weeks, and I thought it could all fall in a heap. At that time my business – NW Marine – was installing equipment on cruise ships – I haven't been near one since. So I thought I'd set up a boutique sound and lighting company which became NM Live, which was Norwest Marine. So I bought my first set of L-Acoustics gear from NW Group.*

JG: But why? No income?

**CK:** *No income from NW Group and I didn't see it surviving. My glorious retirement was to have been the sale of my shares in that company, but then on March 2020 during COVID, the private equity owners valued their shares down to nothing... which I figured was what I was going to get. I started NW*

*Productions in 1993, and in 2000 I was doing the Olympics, so I figured I'd just do it all again! Then JobKeeper came in, and now NW Group is going gangbusters, and one day I'll get a return when I sell my shares!*

JG: How old are you now?

**CK:** *77 next January! That's the new 57.*

JG: I worked on shows with you last year, and I remember you were running around like a man possessed, and I was trying to keep up with you!

**CK:** *You should see what I did on the weekend – 19 hours on Saturday in 42 degrees, followed by 13 on Sunday. I was certainly hot!*

JG: How do you cope in that heat? How about the crew?

**CK:** *I think of myself as a 45-year-old. The crew were wilting. On the way home Alice and Kyle – they were asleep 10 minutes after we left. I was the only man standing. I don't feel any different to the way I felt when I was 27.*

JG: What do you attribute that to?

**CK:** *Genes, and my two PT (personal trainer) sessions every week.*

JG: When did you meet your wife Sarah?

**CK:** *At the Olympics in 2000, we've been together ever since.*

JG: Let's talk about A1 Audio, which was before Norwest Productions.

**CK:** *Started in 1987 with your ex-partner, Lindsay Hall. You became his ex-partner and I became his next partner. It did what it did until 1993, until I set up Norwest Productions.*

JG: You started as a musician?

**CK:** *Since I was 14, I was in 'proper' jobs until I was 27, working in finance and real estate. I went out on my own and met the credit squeeze of the 1970s and had to trade my way out of trouble over three years. Drove a cab for six months, 12 hours a shift, but then reasoned I could do four band gigs and earn the same money. I set up an agency called Oz Management in 1974 – that's what I did until*

my mid-life crisis at 40 when I joined forces with your ex-partner, Lindsay, and started A1 Audio.

JG: How did A1 end?

CK: Lindsay didn't want to be in that kind of business as I was growing it – he preferred to take his PA and go do gigs with JPY and Jon English. So I just started a new business.

JG: What was the pathway from Norwest Productions to the Olympics?

CK: I grew it into a premier mid-level company with half a dozen people. I saw the Olympics as too big, too hard, and planned to do a lot of lucrative side events – all the low-hanging fruit basically. I opened the mail one morning to find a letter from the Production Manager saying the audio director (Australian legend, the late Bruce Jackson) was going to do a PA shootout at the new Stadium.

JG: Everybody was there!

CK: I called him up to say we wouldn't be there, but my sales instinct led me to ask him how many firms would be at the shootout. He said, "Only four: PRG, Clair Brothers, JANDS... and you" I was a bit shocked. Plus, I owned the box they wanted – I had 16 EAW KF860s; they needed 48.

JG: Why did you have the KF860s at the time?

CK: Because Graeme Stevenson (long time EAW distributor) was a great salesman! I had eight and did a demo for Cold Chisel. Wardie and Rod Willis came out and I told them if they hired us for the tour, I'd buy the other eight. So they did. But we didn't want to do the rest of the Olympics sound – the fibre optics and the huge consoles. Then the phone rang and it was Larry, working for PRG wanting to talk about joining forces. As I saw it, I'd just supply 16 boxes and get two tickets to the opening! I'd paid eight or nine grand for each of my boxes and didn't want to buy more. My hire proposal was for \$2,750 per

box. Then PRG offered to sell me the boxes. I said: "You don't want to sell them for the price I'll pay!" He said, "How much?" I said, "two grand a box," and he said: "DONE!"

JG: Why?

CK: Turned out they were in financial trouble. The event was getting closer and they started ghosting me! I finally got onto them and the guy said: "We're too busy, we can't help you!" So I went to a guy I know in Texas... and bought them for two grand a box!

JG: How did the timeline work?

CK: The shootout was a year earlier, and more people had talked their way in. PRG said we really needed to also put forward the new v-Dosc line array as an alternative so we wouldn't get wedged out. They shipped four out and we did both. The killer was, Bruce preferred the v-Dosc by a mile and we did the testing. Bruce went to get Ric Burch (Director of Ceremonies) and he said, "What are the options?" Bruce said it was v-Dosc first, EAW second. Ric said: "But we can't stack four on the ground, they're too tall" and the v-Dosc system engineer said, "No, actually it must be six!" That was it.

JG: Were you shocked, or exhilarated? From the fringes of the concert business to number one!

CK: We weren't number one. Staging Connections had more staff. JANDS (now JPJ owned by Clair Bros) had more scale.

JG: You. How many kids?

CK: Three with Suzy: Amy is 51, Chloe 49 and Mike's 42. My wife Suzy died in October 1999 the week I got the Olympics contract. My second wife Sarah had two kids from her failed marriage, April and Elliot, who are my kids now really. And we had Will together, who's 20.

JG: Elliot was helping you the other week unloading the L-Acoustics system from the truck into your rural shed. You have a stage truck now as well...

CK: Amazingly, I fell off the back of the gear truck and hit the ground horizontally and was knocked out, only to wake with nothing other than bleeding from a gash in the back of my head, which incidentally cracked the tarmac. Not a problem since!

JG: What a great life, Chris!

CK: I'm SO lucky!

Chris had the lamb souvlaki skewer and I had an overdone pork roast. Modest beer was consumed.



Graeme Whitehouse with Chris Kennedy in their NW Group days



Chris Kennedy and Steve Law FOH at the 2000 Sydney Olympics Opening Ceremony

### About this series and Author

Julius left live production work for good on Australia Day. At the tender age of 66 he ran out of enthusiasm as he started to live a Groundhog Day of live sound gigs. Now he does lunch with people who've outlasted him in this series.





## Solid State Logic

# PURE DRIVE OCTO

**When it comes to high-end analogue preamps, SSL has, in recent decades at least, designed some of the world's best. Famous already for its SuperAnalogue, low-distortion preamps, SSL is now keen to add the words 'harmonic distortion' to company's list of associated terms. But is the Pure Drive Octo just a preamp, or is there more to it?**

For decades now, Solid State Logic (SSL) has sat comfortably at the exotic end of the pro audio spectrum; its large-format consoles arguably the most iconic of any professional analogue board in history. More songs have been mixed on an SSL in the last 50 years than any other, and still the most clichéd image of a person depicted 'in the studio' typically shows someone sitting at an SSL console.

Many of the best studios on earth still have an SSL dominating their main control room, although these days no-one feels compelled to own one. Neve, API, Focusrite and several other brands also provided epic doses of high-end esoterica and gravitas back in the day; indeed, some still do. And of course, plenty of studios abandoned large-format consoles altogether years ago.

But realising the lingering desire of many to own their 'dream SSL' one day, a few years ago, SSL released its 'Origin' console, to satisfy the sustained global demand for large-format analogue consoles, and to provide a new option for people who were otherwise being forced to play Russian roulette in the second-hand market. The preamp in the Origin console features SSL's new 'Pure Drive' preamp; a blending of the company's pristine SuperAnalogue design concept of some years ago now with a controllable dose of harmonic distortion, to create a more versatile and even more reliable next-generation SSL preamp.

This next-gen circuitry has now been transported across into two new products: the SSL Pure Drive Octo and Quad preamps – 19-inch rack-mounted versions of the SuperAnalogue Pure Drive microphone preamp, with several impressive additional features added to the equation.

Indeed, the SSL Pure Drive Octo preamp, which I've been testing for a couple of months now, offers so many features beyond providing a simple mic/line amplifier that the word 'Preamp' in the product name arguably sells this unit well short.

The preamps themselves are everything we've come to expect from SSL: they're beautifully made, ergonomic, gloriously tactile, deceptively versatile and amazing sounding. Unsurprisingly, the Octo Pre has the eight preamps – hence the name – featuring all the usual control suspects, but it's how these are deployed that really sets the Octo apart.

Fundamental stepped gain is provided in smooth and understated 6dB increments out to +65dB, while a secondary trim control knob per channel provides a finer 1dB gain resolution (+/-15dB). Phantom power is tastefully deployed (per channel) by simply pressing and holding individual preamp gain pots, meanwhile a polarity inverter is similarly engaged by clicking (but not holding) the gain pot.

A fixed 75Hz high-pass filter is also accessed in this manner, this time via the trim pot, while pressing and holding said pot toggles individual channels between mic and line. The status of each of these control options is clearly expressed via bright green LEDs in classic SSL style. Particularly in dim studio light and with many of these features engaged, the Pure Drive Octo preamp lights up the room like a Christmas tree.

But the feature list doesn't end there... not by a long shot.

Below each channel's dual control knobs are a couple of soft switches that access even more sonic options and functionality. The left of these individual pairs of switches, labelled 'Z', offers four different impedance options for microphone matching and tonal colour shaping. Conveniently, the different ohms ratings are themselves LED-backlit and colour-coded, a legend for which is printed on the front of the unit – luminous Green: 12kΩ, Amber: 600Ω, Red: 400Ω, and 'Off' (no light): 1.2kΩ.



Staying with this left control soft-switch for a moment, here we can also access an insert point per channel that's physically available on the back of the unit via D-sub connectors. To access this function, you must first press and hold the global 'Insert' button on the right side of the unit, then switch each individual channel off or on as required. This is a great feature that allows other external gear to be inserted neatly into the preamp, making the Octo behave more like a small console with an internal patchbay.

Moving next door to the right soft-switch, here we can access arguably the unit's most noteworthy feature – Drive. There are three different types of harmonic distortion characteristics in the preamp stage of the Pure Drive Octo that SSL defines as: 'Clean', 'Classic Drive' and 'Asymmetric Drive'. 'Clean' – somewhat predictably – offers an impressively low-distortion SuperAnalogue preamp stage that sounds clear, detailed, and (some might say) colourless. To my ear this preamp option sounds superb on just about everything, vocals in particular, although in an age where preamp popularity contests mostly revolve around distortion and limiting characteristics, SSL's super clean option no doubt gets criticised already for lacking 'character'. But that's precisely not what these acclaimed preamps are about to begin with. They unapologetically offer a super-clean window into any source, like a microscope or a new car windscreen. There is no colouration here, no smudges on the glass...

But if it's colour you want, you can easily switch the Octo to 'Classic Drive', which immediately provides your signal path with predominantly odd harmonics that tend to drive any input signal into euphonic distortion, depending on the gain settings. This option sounds great on most recordings that require a bit of roughing up on the way into your DAW: drums, guitars, basses, frankly anything that needs to be pushed, particularly when you make the most of the Octo's two-knob architecture that allows you to first add 'too much' gain, then trim it back so that it's not clipping the output or pushing other links in the audio chain into further distortion.

But if that's not enough, the unit also has a third, 'Asymmetric Drive' mode which adds predominantly even-order harmonics, which makes the input signal notably darker, thicker and more compressed sounding. This is probably the most 'old-school' sounding of the three preamp modes.

### But Wait, There's More

All these features of Drive, gain and trim, combined with the various impedance options make the eight preamp channels of this SSL unit incredibly versatile and fun to play with... and there are also (before I forget) four unbalanced Hi-Z DI inputs with auto input detection on the left side of the front-panel and eight PPM meters on the right. There's also a soft on/off switch top right (and a hard on/off on the back panel). But we're not done with this unit's 'preamp' facilities yet...

There are two more switches on the right side of the unit, directly below the global insert switch – Rate/A/D and Clock – that reveal other obvious tricks this unit has up its sleeve (although the back panel tells the real story here).

The Octo features an integrated USB soundcard providing eight channels of audio into your DAW at up to 32-bit/192kHz. There are four AES/EBU output pairs, and ADAT out, offering eight channels at 24-bit/48kHz, or up to four channels at 24-bit/192kHz via SMUX. The AES and ADAT outputs can even be individually repurposed to be fed from the onboard USB soundcard as outputs from your DAW. There's also word clock in and out, eight rear-mounted combo XLR inputs, and three sets of D-sub connectors for line-level inputs, insert sends and returns.

The SSL Pure Drive Octo is a classy unit overall. It is modern, feature packed, simply laid out and great sounding. It is beautifully constructed, well vented, and from what I can surmise, fan-less, which means it is quiet but also tends to get relatively warm. The digital conversion and interconnectivity are great additional features that take the unit well outside the scope of a 'simple external preamp'. The unit is not cheap by any means (what SSL product is?) but the quality is plain here for all to see, making this unit a worthy addition to any studio.

**Product Info:** [solidstatellogic.com](http://solidstatellogic.com)  
**Distributor Australia:** [www.ambertech.com.au](http://www.ambertech.com.au)  
**Distributor New Zealand:** [amber.co.nz](http://amber.co.nz)



# ShowPro LED ePAR UV

Lighting designers and production managers have been all too happy to specify LED moving-head lights for their shows and tours. However, there's some hesitation when it comes to spec'ing LED UV fixtures, with many preferring to stick with conventional, or fluorescent, UV.



LED lighting for live events has come a long way in recent years, but there's still room for improvement. One area where the slow pace of advancement has been most noticeable has been in the realm of UV lighting. But that's starting to change.

Of course, purists have claimed that there's no such thing as LED UV. On the electromagnetic spectrum UV (or ultraviolet) falls between the range of 10 and 400nm (nanometres). In the past, typical LED lights that claimed to be UV sat at about 400nm. To the naked eye this has tended to look purple, as at 400nm the wavelength is still technically in the violet range on the visible spectrum (380-450nm), even though there's an overlap between violet and ultraviolet. This can, of course, be great for colour mixing but it doesn't give you that 'true UV effect'.

The ShowPro LED ePAR UV meanwhile has a 127W COB LED engine, which outputs 230 lumens at a wavelength of 365nm – safely inside the ultraviolet spectrum. This gives the fixture a strong UV presence with less of that purple light. It also has a detachable front lens with different available zoom options in the range.

COB stands for 'Chip On Board' – a newer technology that allows the LED chip to be mounted directly on the substrate. This results in higher intensity and greater uniformity of light, and is a more efficient method of manufacturing 'lumen-dense' LED arrays. We will likely see more COB LEDs moving forward, especially amongst battery-powered units and compact fixtures.

Typically, the human eye will respond to (be able to see) any wavelengths between 380 and 750nm on the electromagnetic spectrum. This small range is often known as the 'visible' spectrum. Here, there are six basic colours; the same six you will find in a rainbow. Other colours like magenta and teal are formed by mixing these colours:

- Violet: 380 – 450nm
- Blue: 450 – 495nm
- Green: 495 – 570nm
- Yellow: 570 – 590nm
- Orange: 590 – 620nm
- Red: 620 – 750nm

On either side of these colour ranges are ultraviolet and infrared.

The process where certain objects appear to glow under UV light is known as photoluminescence. I'm sure we all have a bit of an idea what UV light will make glow, but did you know that it will also pick up the following:

- Tonic water
- Honey
- Eggs
- Chlorophyll
- Scorpions
- Platypus
- Some dental work and teeth whiteners
- Radiator coolant
- Petroleum jelly
- Olive oil

## The Light's Construction

The ShowPro LED ePAR UV is made from a lightweight die-cast aluminium. It's a fairly compact light that weighs in at a mere 5.5kg. It's sturdy and well put together, and perfectly suited to life in a venue as an install fixture or being moved around as part of the inventory of a production company. It basically weighs the same as your typical LED par, and with dimensions of 450 x 316 x 208mm, the LED ePAR UV only needs a single clamp. It's an easy one-person lift and light enough to be hung at any orientation. Construction is simple and solid, with no user-serviceable parts. Maintenance therefore consists only of cleaning and little else.

## Optics, Colour & Brightness

As for brightness, you don't see the full light itself, for obvious reasons. As mentioned, being UV, it sits outside the visible spectrum. Just don't stare into the light when it's on. Of course, when you shine the light at anything UV sensitive, that's when you'll notice it. In that event, you will find that it's very punchy. It works well on UV paint, white clothing and

Unboxing



The LED ePAR UV





## The Specs

Lamp Source: 365nm UV COB LED

Angle: 36°

Field angle: 56°

Dimming: four dimming curves

Output (lux): 230lm

Strobe: 0-30Hz Protocol: DMX, RDM

DMX channels: 1CH/2CH/3CH/6CH

Data connections: three-pin and five-pin XLR In/Out for DMX

Mains: 100-240 VAC, 50/60Hz

Consumptions: 127W @ 230V

Power connections: powerCON In/Out

Onboard menu: OLED display with 4-button

Cooling: Active (variable speed fan with silent mode)

Material: Die-cast aluminium

Finish: Matte black

Dimensions: 450 x 316 x 208mm

Weight: 5.5KG

even dandruff! Once you see the ShowPro LED ePAR UV in action in the metal, there's no question as to whether it's a 'real' UV light.

## Applications and Features

The features list for this light is far shorter than many others we see. In fact, it could probably more accurately be classed as an effect more than a light. It's a one-trick pony, no question: it doesn't move or change colour, there are no gobos, no shutters... nothing like that. It's a static LED UV par with an output that's technically in the pure ultraviolet range. So while it's a fantastic UV light, make no mistake, it's nothing else. It does not double as a regular LED par. It does one thing and does that exceptionally well.

## Control and Programming

Both three-pin and five-pin XLR in/out can be

found on the ShowPro LED ePAR UV. RDM is available as well. It can be operated in either 1, 2, 3 or 6-channel mode, meaning you could put a lot on one universe, where you will likely have signal issues before you run out of space in the patch. The light has four different dimming curves, comes with a number of different lens options, depending on how wide or narrow you want your shot to be, although it's worth noting here that these lenses have to be manually fitted. Power is delivered via Powercon in/out, and with a draw of 127W, you can get quite a few units on a single 10-amp circuit.

## Verdict

If you want a proper (365nm) LED UV, not a 400nm black light, then this is the light for you: a true LED UV Par. Part of me would like to have seen this fixture pan, tilt and zoom, and be available as an IP-rated version that you could stick outside. I also wonder if a flood would have been more effective than a par. On the other hand, adding these features would

likely only have made the ePAR UV prohibitively expensive. In the end, the focus of this unit is its COB LED UV light source, and in this regard, ShowPro have knocked it out of the park.

Outside of nightclub and dance party-style events, we don't normally see UV lighting, except in very specific circumstances. I don't know if the availability of cheaper, more convenient LED-based UVs will do much to change this fact, nonetheless true UV capability adds a noteworthy addition to the repertoire of what modern LED lighting can achieve.

[www.showtech.com.au/product/led-epar-uv/](http://www.showtech.com.au/product/led-epar-uv/)  
[www.showtech.com.au](http://www.showtech.com.au)  
[www.showtech.com.au/homenz](http://www.showtech.com.au/homenz)

# Are you concerned about your mate's mental health?

**FACT: Most Australian tech crew and roadies have attempted or considered suicide<sup>1</sup>!**

**Support those around you and register for free mental health training**



<sup>1</sup>Passion, Pride, Pitfalls Dec 2014

[www.entertainmentassist.org.au](http://www.entertainmentassist.org.au)

Supporting the mental health of Australian entertainment industry workers





# INCONGRUOUS ENGAGEMENTS

*Snippets from the archives of a bygone era*

## Saturday Night's Alright for Fighting

On a rainy Saturday evening in the mid 70s, I got a call from a mate, Col, whose car had broken down enroute to his band's gig at the Chatswood Charles Hotel, Sydney. Col was also a regular stand-in drummer for my first band, after we had fired our drummer for turning up at our first gig in an inebriated state and carrying a concealed weapon. "This is in case anyone gives us trouble," he told us.

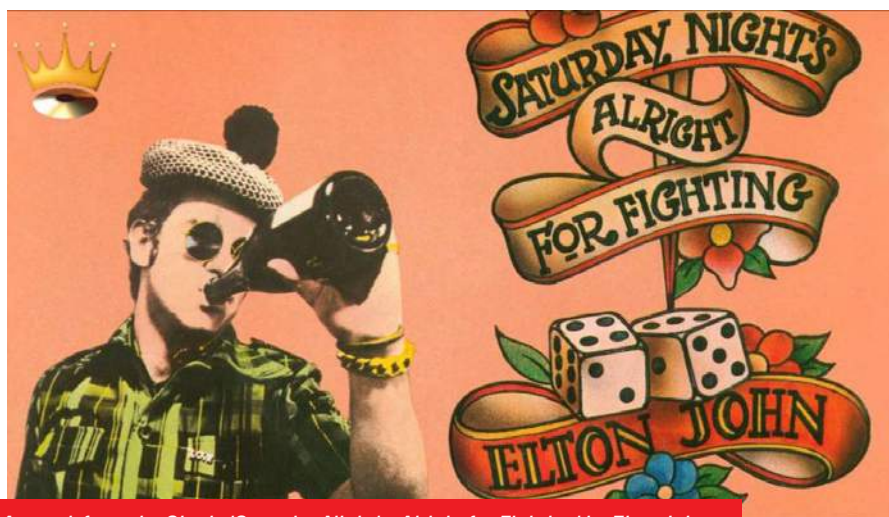
Col played in a band called Magic that had regular agency gigs, and coincidentally, it was Col who gave my band that first ill-fated gig. Col and I loaded his drums into my Toyota Hi-Ace van and proceeded to the gig at the Chatswood Charles. These were the heady days of the rough and ready pub crowds, and even in the plush suburb of Chatswood, you had to 'watch your six'. One of Magic's numbers was Elton John's 'Saturday Night's Alright for Fighting'. The band was barely past the four-bar intro when a massive brawl broke

out in the venue and continued throughout the song. It couldn't have been any more surreal if it was scripted.

## The Christmas Carols

It's an ill wind that blows no good, and it was an ill wind that brought stormy weather in December 2006, causing the cancellation of an outdoor Christmas Carols event that I had spent weeks organising and booking the various acts for. In desperation, I approached the local RSL and was given permission to stage the show in their auditorium. However, this was the evening of their annual Christmas raffle; it was one of those ubiquitous club raffles where they stack to the roof everything from microwaves to mini bikes.

The club was already packed when the Christmas Carols crowd arrived, and they didn't appreciate the lack of seating and waiting until the main raffle prize was drawn. So the show, which had multiple acts, went late into the night. There was the choir, the dancers, the children's show, and the jazz band, all complaining about the long delays. And when Santa, who was out on the town getting drunk, failed to show on cue, the kids invaded the stage and wrecked the sets. Guess who got the blame?



Artwork from the Single 'Saturday Night's Alright for Fighting' by Elton John

"As bizarre as seeing worshippers drop their crutches and stagger about the stage after a healing hand was placed upon their heads, the worst was yet to come..."



## The Faith Healing Event

In the mid-90s, I organised the sound, lighting, and video crew for a religious event that was held inside the Wran Centre, Villawood, NSW. The event attracted a crowd of approximately three thousand people and was hosted by El Shaddai, which is an apostolate Catholic movement originating in the Philippines that incorporates faith healing into their meetings. As bizarre as seeing worshippers drop their crutches and stagger about the stage after a healing hand was placed upon their heads, the worst was yet to come; this would manifest in the form of the video that I had contracted for the event.

The edited VHS video of the El Shaddai event, which arrived in the mail, had grossly distorted audio that rendered the dialogue almost inaudible. I became suspicious that the video guy was aware of this when he wouldn't return my calls. My guess was that he had dumped the audio from his camera via the XLR connector at line level into an XLR connection on a mixer at microphone level, which would have boosted the signal another 60 dB or so and into distortion.

After making a number of telephone calls and leaving messages that remained unanswered, I drove to the address that was on the video guy's letterhead. I arrived at a modest

residential house in Sydney's south-west and knocked on the door. The video guy wasn't home, but his mother was. I explained to her that I held no animosity towards her son and that I just needed the master tape, which she found and handed to me.

The delay in presenting the finished tape drew a lot of flak from the event organisers, who began slighting me as some sort of huckster. Fortunately, I was working for Greater Union at the time, and I was put in touch with a video editor who very graciously re-edited the entire video, which I was then able to deliver complete with intelligible audio.

**(( bsound ))**

**BAND PA SYSTEMS, VOCAL PA SYSTEMS, LIGHTS**

Pick up and do it yourself, or Delivered, Set up and Operated by experienced Crew.

Mark Barry; (03) 9889 1999 or 0419 993 966

[www.bsound.com.au](http://www.bsound.com.au)  
[mark@bsound.com.au](mailto:mark@bsound.com.au)

**RentalPoint**  
SOFTWARE

Powerful web based software

**CX**

GET THE LATEST  
**INDUSTRY NEWS VIEWS AND JOBS**  
 TO YOUR INBOX EVERY WED

Register now at  
[cxnetwork.com.au](http://cxnetwork.com.au)





### Elvis Fan

I was never much of an Elvis fan, but I did cover a few of his hit songs in my one-man-band show. They were the ones he sang in the lower baritone range with his familiar vibrato, such as, Don't Be Cruel, Teddy Bear, and others. It was really more of an attempt at an impression, which worked.

I have mentioned in the past coming into contact with impassioned Elvis fans, but there was a standout in 1991, when I was working my 50s/60s act in a club somewhere in Sydney's outer west.

My first bracket was always laid back, and I would include a couple of instrumentals by The Shadows, which was an attempt to legitimise my guitar playing ability and detract from the rest of the sequenced backing tracks. As I was heading to the bar after the first set, I was stopped by a punter who rose from his seat and took hold of my arm. He was ostentatiously garbed and excessively jewelled; he wore a red sequined shirt with a turned-up collar, and he had slicked back hair and sideburns.

"Mate, are you going to do some rock 'n' roll?" he slurred.

"Yes, I mostly do rock 'n' roll," I said.

"No, no, I mean, are you going to do some real rock 'n' roll?" he pleaded.

"Yes, lots of that coming up," I said as I pried his fingers from my arm and continued my journey to the bar. Strangely, I didn't wake up to his Elvis imitative attire, as these were my misanthropic days, when I had little time for mind-numbing chats with inebriated punters.

After breaking out my Elvis numbers in the second bracket, I again headed to the bar and was again detained by the same punter. "That's what I mean; that's the rock 'n' roll I

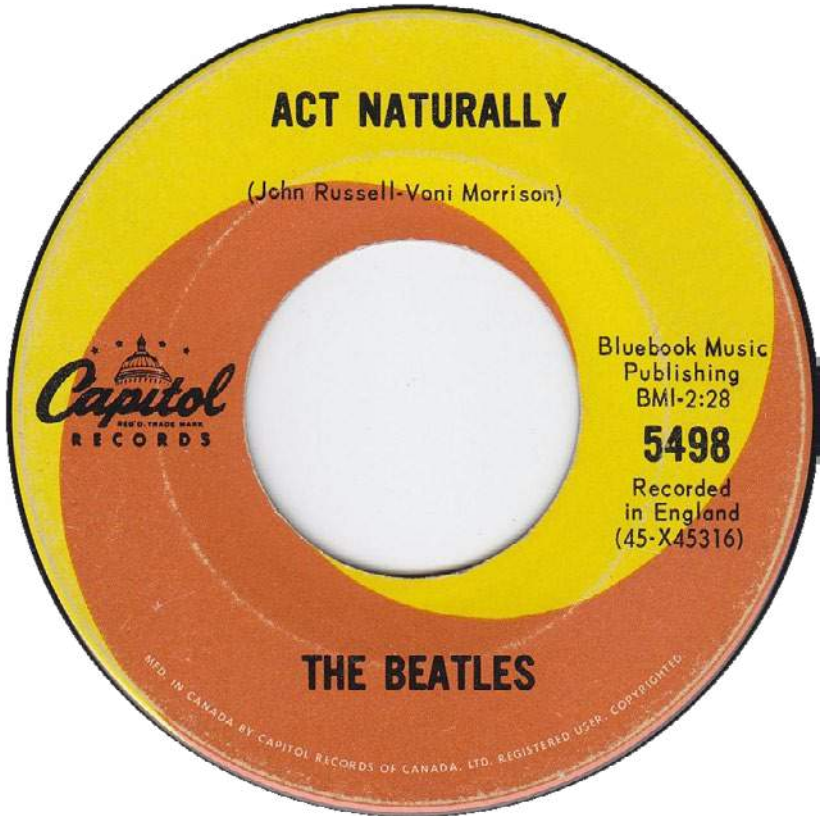
was talking about!" he blurted. He then began a long-winded diatribe about his theory that Elvis' doctor, whom he insisted had a gambling addiction, had administered a lethal injection to the King because he couldn't pay back huge sums of money he had borrowed from him. Then he added, "And you know what? I don't even believe he's dead."

### Act Naturally

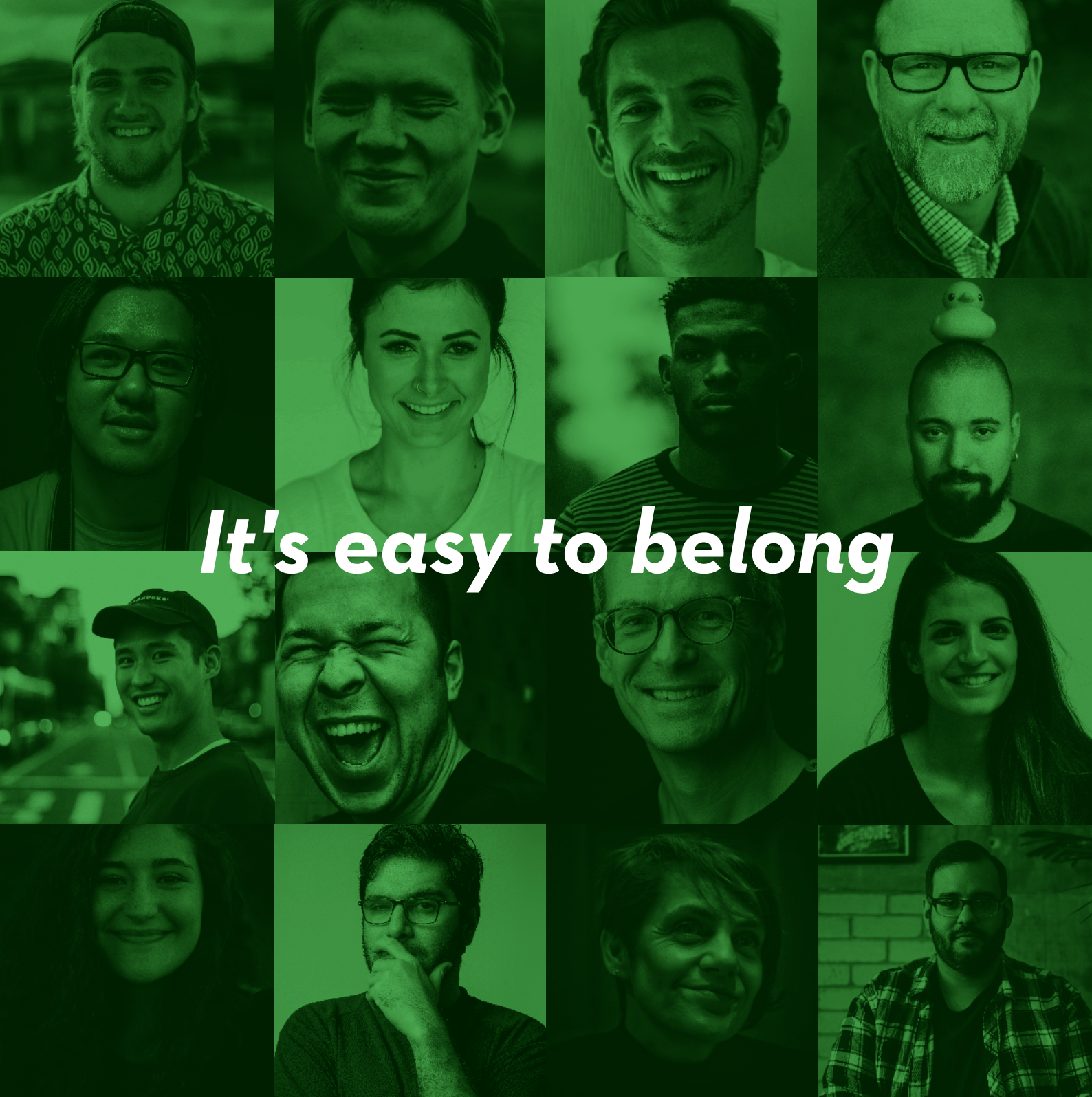
In the mid-80s, during my band management days in the Philippines, I booked a covers band for an outdoor US Air Force event. The organisers had hand-picked my band after seeing them in their residency. Towards the end of the performance, one of the organisers approached me and asked why the band wasn't playing any country music. My attempt to explain that this was never stipulated in the booking was quickly terminated by the irate organiser with the caveat, "Well, I'm the one paying the money for this shindig, and I ain't paying unless you guys play at least one country song."

The band insisted they didn't know any country songs. Digging deep, I suggested 'Act Naturally', which was a Buck Owens song that Ringo sang on The Beatles Help album. So, during the break, I taught the band the song, but the lead female singers weren't confident they could remember all the words. "Why don't you sing it, Brian? We'll back you in the chorus," said one of the singers.

I hadn't sung live for about four years, and I'd never sung a country song, but I knew the words to every track on The Beatles Help album. So, I took the microphone in hand, put on my best Texan accent, and somehow it all magically came together. Of course, I was backed by one of the best bands in the country. "That was just great," said the organiser, who then handed over a fistful of dollars. Yeeha!







***It's easy to belong***

**Become part of the industry peak body and enjoy  
the numerous rewards, inspiration, advocacy and  
networking that only participation can deliver.**

**BECOME A MEMBER TODAY**

For more information, please visit  
[aceta.org.au](http://aceta.org.au) or email [julie@aceta.org.au](mailto:julie@aceta.org.au)

**aceta**   
Australian Commercial & Entertainment  
Technologies Association





# THE CHOICE OF LEADING LIGHTING DESIGNERS WORLDWIDE

DYNAMIC • RELIABLE • 3 YEAR WARRANTY



**SUPER DOTLINE**



**PULSAR S2**



**GEMINI**



**AECO 5**



TAKE ADVANTAGE OF OUR STOCK IN AUSTRALIA & NEW ZEALAND

AUS 1300 852 476 | NZ 09 218 6532 | [info@ulagroup.com](mailto:info@ulagroup.com) | [ulagroup.com](http://ulagroup.com)